Post-Graduate Lecture

ON

TOBACCO AMBLYOPIA.

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GENTLEMEN,—Tobacco amblyopia, as a recognised disease, has an ancestry which dates from the year 1792, when attention was first drawn to it by Beer. In recalling this fact it would be of interest to learn the precise form of tobacco of which use was made in those days and the manner of its use. The possibility, however, of tobacco smoking being able to cause defective vision appears to have excited but little interest until Mackenzie in 1833 laid much stress upon the fact. After all this can scarcely be regarded as a matter for surprise, inasmuch as our forefathers were heavily handicapped in respect to the diagnosis of diseases of the fundus. In the pre-ophthalmoscope days all diseases of the fundus were described under the generic term of amaurosis, which Mackenzie defined as "obscurity of vision depending on a morbid condition of one or several of the nervous parts which assist in forming the optic apparatus." Richter, quoted by Mackenzie, affirmed that there was only one objective sign in amaurosis—namely, "something vacant and unmeaning in the look of the patient," with which expression of opinion Mackenzie agrees. But, as we know, this description in no sense applies to a patient suffering from tobacco amblyopia. On the contrary, a hospital patient walks boldly into the out-patient room, acts as if he saw plainly, while neither in gait nor in gesture does he display the loss of vision which is present in his case. The external appearance of the eyes is negative as to any ocular defect; nevertheless, some general signs are invariably manifest suggestive of his condition, to which I shall draw attention later. In parenthesis, however, let me here observe how unsatisfactory must have been the practice of ophthalmic surgery before the introduction of the ophthalmoscope. To employ that inane and silly expression "one shudders to think" what ophthalmic surgeons would do in the present day without that indispensable adjunct to their daily work. Apparently Mackenzie arrived at the diagnosis in his cases by relying upon the well-known "method of exclusion." He writes: "I have already had occasion repeatedly to hint my suspicion that one of the narcotic series which custom has foolishly introduced into common use—namely, tobacco—is a frequent cause of amaurosis. A majority of the amaurotic patients by whom I have been consulted have been in the habit of chewing, and still oftener of smoking, tobacco in large quantities."

Unfortunately, the only case of tobacco toxæmia which Mackenzie mentions is one in which the symptoms were general and acute, while no reference is made to the vision. Presumably the case is recorded for the purpose of showing that tobacco could cause serious toxic symptoms. On the other hand, it would have been more interesting had he published the notes of some cases in which he had reason to believe that amaurosis was present as the result of the tobacco habit. A perusal of Mackenzie's work indicates that in pre-ophthalmoscope days the only means possessed by our forefathers of discovering the cause of amaurosis was by post-mortem examinations. Mackenzie indeed plaintively observes that "the want of accurate dissections is one great cause of the obscurity which hangs over the subject of amaurotic disease." Possibly this conviction was in his mind when he was only able to "hint" repeatedly to the connexion between amaurosis and the use of tobacco. Possibly, also, had the opportunity ever been afforded him, which does not appear to have been the case, of seeing a post-mortem examination upon a patient who had died from tobacco toxæmia he would have been considerably surprised on finding nothing to account for the amaurotic symptoms, and nothing to support his belief that there was present "some lesion of one or several of the nervous parts which assist in forming the optic apparatus."

But passing from the past to the present, with some pitying regard for our forefathers in the lack of knowledge prevalent in their time, let us study the picture presented by tobacco amblyopia as we know it. In doing so let us take a typical case of the disease as it comes under notice in the out-patient room. A middle-aged, well-to-do looking workman walks boldly up to the surgeon and complains of failing vision. Let me here, however, again repeat that in the examination of eye cases always examine the eyes last. This may appear to be a curious paradox. On the contrary, it is undeniably a precept of importance, expediency, and usefulness in the ordinary routine of ophthalmic work. Remember, then, to take note of everything else, apart from the eye, first. For example, look carefully at the patient's face, observing the condition of the skin, the colour of the complexion, the physiognomy, or whether there are present any scars or any eruption, or whether any scarring exists over the sides of the neck. A glance will determine these various points. But without giving further examples of this preliminary inspection let us recall the value of it. A man comes with one eye covered. One can guess what is the matter with it without looking, for his forehead is covered with a profuse papular syphilide. Again, a child is brought with acute inflammation of both eyes: the diagnosis is shown on the face, for that displays the characteristic signs of congenital syphilis—a fact which the subsequent inspection of the teeth confirms. So it is that the man who comes with tobacco amblyopia is not without certain features which at once raise suspicions respecting the source of his trouble. Among these may be commonly noted pallidness of the face, tremulousness of the hands, marked furring of the tongue, as is apparent when he is told to show it. To test for the tremors direct the man to stretch out his arms straight forwards from the shoulders, approximating, but not touching, the thumbs. So far no questions have been asked, but now we may proceed to do so. He informs us that everything for, say, the last three months has appeared to be "in a fog," as he expresses it; that he can only read large print; that the sight is now so bad that he has been compelled to cease his employment; that for some time he has felt "shaky"; that he has no appetite for his breakfast and cannot eat till the middle of the day; that he has great difficulty in distinguishing between gold and silver; that he has sleepless nights; and that everyone he sees appears pale and out of health. Thus the diagnosis is gradually developing. Next we inquire as to his habits. He admits that he smokes from a quarter to half an ounce of shag daily, that he has done so for many years, that directly he wakes in the morning he begins to smoke and continues, off and on, doing so while at work until his midday meal. Inquiry has now to be made into the state of his vision and for this purpose he is taken to the test-types. His distant vision is found to be reduced to $\frac{6}{nil}$ without any improvement with a lens. His near vision is also bad and may even have failed to J.20 at 6 inches. On examination with the ophthalmoscope nothing definite is noted apart from the normal; and at last the diagnosis is made certain by testing the colour vision when there is revealed a central scotoma for green and red.

We will now proceed to discuss in detail the various points which come under notice in the diagnosis of these cases. There is first the question of the age incidence. Tobacco amblyopia is very rare in youth; the period of its most frequent occurrence is during middle age. Mackenzie believed that the injurious influence of smoking or chewing was due to an accumulative effect of the tobacco poison, prolonged over many years. Primarily, however, the real explanation of the toxic symptoms in these cases probably is that a lowered vitality of the tissues, with the advance of age, is followed by a defective elimination of the poison. In this regard it is common for patients to express surprise on being informed that this loss of vision is due to their tobacco habits. "I have smoked," they may say, "the same quantity of tobacco daily for 20 years and have never been any the worse. Why should it affect me now?"

The chief factor, however, in respect to all these cases is the quality of the tobacco of which use is made. Moreover, the quality determines the onset of the toxic symptoms. The variety of tobacco resorted to by the majority of working men is shag, mainly, I suppose, because of its cheapness, but partly because it is strong. With strong tobacco like shag smoking to excess can be indulged in without causing any local disturbing effects. On the other hand, the milder forms of tobacco under similar conditions invariably give

rise to local symptoms, such as soreness of the tongue and lips, arising from the irritation and heat of the smoke. Furthermore, cigarettes, when indulged in too freely, tend to produce chronic pharyngeal catarrh; in each of these cases, therefore, the local discomfort arising from the excessive smoking acts as a safeguard leading temporarily to the partial or entire cessation of the habit. Next we find in the toxic cases that the quantity smoked is invariably from a quarter of an ounce to half an ounce of shag daily. It is seldom more, never less. The tobacco is sold in packets containing a quarter of an ounce, so that the workman knows exactly how much he uses.

The furred condition of the tongue and the loss of appetite are, again, factors of much importance. They indicate the presence of chronic gastritis, which is always a prominent feature of the disease. The question, perhaps, is still an open one as to the real connexion between the gastritis and the toxic symptoms. Horner held that the nicotine was the cause of the gastritis, but that the gastritis was responsible for the changes which led to the visual defect. Again, Sachs alleges that certain complex chemical combinations occur in the stomach between the normal gastric juice and the nicotine and that these act more injuriously than the simple tobacco bases themselves. However this may be, it should, nevertheless, be remembered that amblyopia is not the only symptom of chronic tobacco poisoning. Tremors and cardiac disturbance are also frequently, if not generally, present. Moreover, these signs may be met with without any disturbance of the vision. According to Brunton "the substances which are produced by the dry distillation which the tobacco undergoes in the process of smoking are chiefly the volatile alkaloids, pyridine, picoline, and collidine with other bases nearly resembling them in character, all of which are closely allied both in smell and physiological action to nicotine." But while the above are volatile alkaloids, nicotine is a liquid one, which in the process of smoking is retained in the pipe and may thus become mixed with the saliva and be swallowed. The conclusion, therefore, is reasonable that the alkaloid nicotine is the main, if not the only, cause of the toxæmia following excessive smoking, of which the amblyopia is only one of the symptoms—just as primary atrophy of the optic nerve in tabes is only one manifestation of a disease in which general symptoms supervene. An interesting symptom commonly associated with tobacco amblyopia is that of hemeralopia—day-blindness. Be careful not to confound this term with nictalopia, which is night-blindness, as you will find is the case in some text-books both in this country and, especially, in America. The patients often assert that their vision is much worse in a bright light than when the light is dull. A case is recorded by Fuchs of a coachman who was able to distinguish the numbers on the doors of houses in the dusk, which he was unable to do during the day time. This hemeralopia is probably dependent upon the strong light causing contraction of the pupils, by which the defective central vision is brought more into play; while in a dull light, with more dilatation of the pupil the peripheral part of the field of vision is made available for visual purposes.

We next come to the pathology of these cases. That in a large measure is still a matter of speculation. According to Samelsohn the changes present are those of a chronic interstitial inflammation of the papillo-macular bundle of fibres of the optic nerve immediately behind the disc. Hence these cases have been described as belonging to the category of those included under the term retro-ocular neuritis. Notwithstanding, however, the chronic inflammatory changes which may be present, the ophthalmoscopic appearances are entirely negative. The disc usually appears natural; occasionally some hyperæmia may be noticed in the early stages, which later may be followed by some pallor on the temporal side; furthermore some observers have noted minute yellowish dots in the macular region. The fact, however, remains that tobacco amblyopia is unassociated with any ophthalmoscopic signs typical of the disease, and thus it is, so far as the diagnosis is concerned, that no help, except in a negative sense, is to be obtained from the use of the ophthalmoscope in these cases. Nevertheless, whatever may be the precise nature of the changes of which tobacco toxæmia is the cause, the fact remains that not only is it accompanied by a marked reduction in the vision, but also by that which may be described as the pathognomonic sign of the disease—namely, a papillo-macular scotoma for green and red.

Loss of colour perception in varying degree occurs in other pathological conditions of the optic nerve, as, for example, in papillitis. But in all these cases the disease by which it is caused is sufficiently manifest, whereas in tobacco amblyopia examination of the fundus reveals nothing to indicate that a central scotoma may be present. A ready and fairly satisfactory method of examining a patient for central scotoma, in the absence of a perimeter, is as follows. Place the patient in a chair facing a window; with the surgeon sitting opposite him, the patient is directed to cover one eye with his hand and with the other to look straight at the surgeon's nose. At about 20 inches from the patient the surgeon holds in front of his nose a green disc, three millimetres in diameter, and asks the patient to name the colour of the disc. The usual answer in such cases is "dirty white." Then while the disc is moved first to the inner and afterwards to the outer side—the patient meanwhile still directing his eye to the surgeon's nose—the question as to the colour is repeated. The name of the colour is then correctly given. A red disc of similar size is next taken and the same procedure followed. By this means the relative central scotoma for green and red is made manifest, and although a perimetric chart of the shape and extent of the colour defect would be more satisfactory, nevertheless, the above method is sufficiently accurate, at all events, to determine the presence of the defect. The other eye is afterwards similarly examined. In the diagnosis of cases of tobacco amblyopia no difficulty presents itself to the expert; being familiar with the train of symptoms even the appearance of the patient alone is often sufficient to suggest to him the possible source of the trouble. On the other hand, to the beginner the cases are always puzzling—partly because there is so little to show in explanation of the defective vision. There is no other disease with which tobacco amblyopia can be confounded; in respect to locomotor ataxia, diabetes, and insular sclerosis, concerning which some stress has been laid in respect to a differential diagnosis, no mistake can be made, inasmuch as these diseases are amply defined by their general symptoms.

We come lastly to the all-important question of the treatment of these cases. This resolves itself into two main features: (1) the absolute prohibition of every form of tobacco habit; and (2) means to stimulate the gastric digestion and cure the chronic gastritis. The first is always a difficult matter for the patient. Having for years been a slave to smoking, the announcement that from henceforth he must altogether cease doing so comes to him as a shock. Nevertheless, he is generally wise enough to see the necessity of following the advice given in this regard, especially when the alternative is pointed out that unless he does so absolute blindness will ultimately be his fate. Still, there are some who simply cannot bring themselves to forego the soothing "weed" in some form. In one such case I was much puzzled, for despite the fact that the man asserted his absolute cessation of smoking no improvement after a month's treatment ensued. Casually, however, I questioned him again as to his habits, and then, shamefacedly, he admited that although he had ceased to smoke he had taken to chewing tobacco. Herein becomes apparent the absolute necessity of avoiding tobacco in any and every form. And yet the temptation to indulge even in the smallest degree to some patients is almost irresistible. I even believe it to be essential to avoid the inhalation of tobacco smoke such as occurs to non-smoking travellers in the smoking-carriages of railways. Again, patients suffering from tobacco amblyopia should be expediently warned against everything which suggests a recurrence to their smoking habits. My advice, therefore, always is to urge them to burn or to destroy their pipes. From the point of view of human nature this is necessary, for a pipe lying neglected upon the mantel-piece is mute, indeed, but it nevertheless almost plaintively pleads for a renewal of that intimate intercourse which establishes between a man and his pipe a companionship which is inseparable.

The second object of the treatment—namely, the cure of the chronic gastritis—is readily accomplished by the administration of a tonic, preferably of strychnine and iron, and this should be continued for several months.

What is the prognosis in these cases? With rare exception good. When the symptoms have persisted for not more than three months perfect recovery of vision usually ensues. After that period full vision is not always recovered, although great improvement is the frequent if not general result. Again, should such patients be permitted ever to

recommence smoking? The absolute prohibition from all forms of tobacco should be maintained for at least twelve months and then afterwards the patient, if so inclined, may begin to smoke moderately and tentatively a mild form of tobacco. In my experience the class of patients in whom tobacco amblyopia is most frequently met with is that of workmen who are able to smoke at their work—for example, bricklayers, bootmakers, and plasterers—and that it is rare among those the character of whose employment renders smoking impossible during working hours.

TROPICAL DYSENTERY.*

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AMONGST the diseases of special interest to the physician practising in the tropics the group of morbid conditions known by the term of "dysentery" ranks only next in importance to enteric fever. Unfortunately, as Manson [24] points out, our knowledge is not in proportion to the importance of the subject and in the latest monographs on the disease it is evident that considerable doubt exists in the minds of eminent climatologists, who have made a special study of the malady, as to the exact boundary line between simple diarrhœa and dysentery. It is, however, only in very recent years that the difficulty of diagnosing dysentery has become appreciated and a few years ago writers used to describe what is now considered to be a group of diseases as a well-defined malady and give its etiology, symptoms, and pathology in precise terms. It would be well, therefore, to start by defining what we mean by "dysentery," and the definition suggested is that "dysentery is an inflammation of the large bowel, associated with pain, tenesmus, some slight pyrexia, and a large number of stools, consisting of mucus or mucopus, with micro organisms but with or without blood." I think the last phrase is important, in view of Dopter's work [13] during the past year, and the evidence which he has submitted that simple diarrhœa may be an abortive form of dysentery and that all cases of acute diarrhœa occurring where dysentery is prevalent should be regarded as suspicious, and, where possible, bacteriological methods resorted to for diagnosis in preference to the rough-and-ready test of the character of the stools.

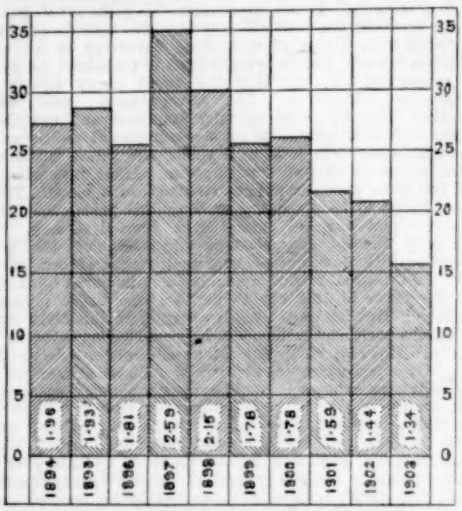

Chart showing the incidence of dysentery per 1000 British troops in India and the number constantly sick from the disease per 1000 of strength during the decennium 1894–1903.

The incidence of dysentery is variable, as statistics must, in a disease of this nature without the aid of a properly equipped laboratory, depend to a considerable extent on the diagnostic idiosyncrasies of individuals. The last Army Medical Department Report shows the incidence of the disease in India to be 16·9 admissions per annum per 1000 of strength of British troops and the number constantly sick for the same proportion of the military population to be 1·34. The incidence has diminished of recent years, as can be seen by the accompanying chart which shows in a graphic form the admissions and number constantly sick per 1000 in the British garrison in India during the last decennium for which statistics are available. It is a fairly well established fact that epidemics of dysentery are usually post-enteric—that is, they usually appear after epidemics of typhoid fever. Firth [18] and Washbourn [27] point out that this occurred in South Africa, and Scheube [32] gives typhoid fever as a predisposing cause of dysentery. In the classification of the varieties of dysentery much difficulty and confusion of ideas have arisen, and as Firth points out, "it is doubtful whether the literature of any disease is more encumbered with a mass of names indicating the nature of the disorder or the author's conception of its pathology than is that of dysentery." [18] Terms founded on a pathological basis such as "catarrhal," "ulcerative," and "gangrenous" have been passed on from text-book to text-book and are used by Manson, Scheube, and even such a recent text-book on pathology as Stengel's [33] (p. 547), and in an article just published in THE LANCET, [40] but as was pointed out by Taylor as far back as 1901 the "disease is essentially the same in all varieties." [33] Such terms merely indicate clinical conditions found in the various stages of a single pathological process, and it would be well, therefore, to dismiss this older classification and adopt the one now used by Osler—namely (1) amœbic dysentery; and (2) bacillary dysentery. This nomenclature was, I think, first suggested by Davidson, [11] but he added to it a third variety, which does not really exist, as his "dysentery of war" is simply a form of bacillary dysentery.

The amœbic type of the disease is essentially endemic in its character and is defined by Firth [20] as "a chronic affection of the small and upper part of the large intestine," but Osler describes it briefly as "a colitis, acute or chronic, caused by the amœba dysenteriæ." [29] The bacillary variety on the contrary is essentially acute or, to use an old word, fulminating in its character. It is usually strictly limited to the large intestine.

Causes of dysentery.—In considering these we must subdivide the heading into (*a*) predisposing causes; and (*b*) exciting causes. Let us first consider the causes which predispose to the disease. We find that these fall under four chief divisions—namely (1) age, (2) sex, (3) occupation, and (4) conditions of lowered vitality. (1) Age.—Dysentery may occur at any age, but in my experience it has a singular predilection for the extremes of life, children and old people being peculiarly liable, the former, doubtless, on account of their well-known liability to catarrh of the intestinal mucous membrane which is itself a predisposing cause of the disease according to Scheube (p. 466). [32] (2) Sex.—According to most authorities this does not exert any influence, but Scheube [31] cites pregnancy as a predisposing cause, and it is within the experience of most physicians who have lived in the tropics that when dysentery occurs in a pregnant woman, or during the puerperium, the prognosis is very grave indeed. (3) Occupation.—Davidson [11] asserts that agriculturists are attacked more frequently than persons whose calling is carried on indoors, and according to Lancarol persons who labour in the heat, such as stokers, cooks, and mechanics, are peculiarly liable to the disease. The occupation of the soldier predisposes to dysentery, especially on active service, as his duties and mode of life involve, of necessity, great liability to chill, and the ingestion of bad or irritating food, indifferently cooked, both well-recognised predisposing causes of the disease. Moreover, on service men and officers are occasionally, as occurred in Ladysmith, unable to obtain remedies for catarrhal conditions of the bowel, which, as we have seen, undoubtedly predispose to true dysentery. (4) Conditions of lowered vitality.—There can be no doubt that in conditions of health the pathogenic organisms of dysentery, enteric fever, cholera, and other diseases pass through the intestinal tract in association with the luxuriant flora and fauna which normally flourish therein, without causing any inconvenience, and that it is only when the mucous membrane of the bowel is the subject of some inflammation, irritation, or impaired nutrition that it forms a suitable nidus for the amœba or bacillus dysenteriæ.

* The superior figures occurring throughout the article are references to the bibliography at the end.

Such conditions of reduced vitality may be induced by a variety of circumstances, first and foremost among which I would place "chill," which Manson declares to be a "powerful excitant of dysentery,"[24] and Scheube considers, above all things, to be mentioned as a predisposing cause.[25] Next I should place "unfavourable hygienic conditions," such as overcrowding, contamination of the soil with sewage, and an impure water-supply. Epidemics of the disease are therefore peculiarly likely to occur in war and as an accompaniment of famine, and Scheube says, "In almost every long campaign or siege the outbreak of an epidemic of dysentery amongst the combatants, amongst the besiegers as well as the besieged, is a common occurrence."[26] Such epidemics have occurred in all ages, as Munson refers to an outbreak of dysentery in the army of Henry V. at Agincourt,[27] whilst the ravages of the disease during the Franco-Prussian war of 1870 and in the garrison of Ladysmith in 1900 are familiar instances in recent times. Enfeeblement through previous disease is a predisposing cause on which both Scheube[28] and Manson[24] lay great stress, and the diseases which are most likely to be followed by dysentery are the two great debilitating diseases of the tropics, malaria and enteric fever. In this relation Buchanan has pointed out that dysentery frequently forms the "terminal disease" in chronic invalids, such as malarial cachectics, tuberculous invalids, and lepers," and my personal experience in a large cantonment general hospital at Umballa confirms this observation. Next in importance to the foregoing I would place "abuse of alcohol." Scheube says, "inebriates usually have severe attacks,"[29] and the writings of all military observers go to show that the intemperate soldier is the one most subject to dysentery and its most terrible sequela, tropical abscess of the liver. German writers mention such predisposing causes of dysentery as insufficient or superabundant nourishment, disorders of the digestion, hæmorrhoids and excessive venery, but I fail to see how these can act otherwise than by impairing the general nutrition. Finally, all authors are agreed that the ingestion of rotten and indigestible articles of food, and especially unripe fruits, predisposes to dysentery, but these again have no specific action and simply act by exciting a catarrhal condition of the mucous membrane of the intestine and thereby rendering it vulnerable to the various micro-organisms about to be referred to.

With regard to the exciting causes, these are in amœbic dysentery the entamœba histolytica and in bacillary dysentery the bacillus dysenteriæ, "a specific bacillus of which there are various strains."[27] I propose to refer to these two varieties separately, as they are in reality two distinct diseases in which the pathological changes are similar but not identical.

Amœbic dysentery.—This variety is essentially slow developing in its nature, although acute attacks are not uncommon. It is styled by Firth and others "endemic dysentery," and it appears to have little tendency to break out into definite epidemics, as is the case with the other form of dysentery. The organism producing amœbic dysentery belongs to the animal kingdom and has been placed by Leuckhart in the rhizopoda class of the protozoa, or one-celled animals. An amœba was first described by Lambl in 1859 and subsequently by Loch in 1875, but to Schaudinn is due our present exact knowledge of the genuine organism. He found that many kinds of amœboid organisms occur in the human intestine and that some of these are not true amœbæ at all but merely amœboid stages in the development of the higher forms of the protozoa such as trichomonas, lamblia, and other infusorians. Genuine amœbæ he divided into two classes: (1) those provided with a shell, the thecamœbæ; and (2) those that have no other covering, or gymnamœbæ. "At least one of the former and two of the latter sort are now known to occur in the intestine."[42] The two naked forms are genuine parasites, but one of them is harmless and the other one of the most dangerous of pathogenic protozoa.[43] Schaudinn[44] has re-named the former, hitherto known as the amœba coli, the entamœba and the latter hitherto known as the amœba dysenteriæ as the entamœba hystolytica. The entamœba coli was found in from 20 to 60 per cent. of healthy stools by Schaudinn and is a shapeless mass of protoplasm not showing much differentiation into ecto- and endoplasm but possessed of a well-marked nucleus. It is difficult to find in healthy fæces, as its habitat being in the upper regions of the colon it dies out as the intestinal fæces become firmer on their passage down the bowel. If, however, the downward course of the fæces is hurried by saline purgatives the amœbæ can be readily detected, as Schuberg has shown. "The amœbæ have two distinct cycles of development; one vegetative or asexual taking place in the naked state, the other displaying a primitive but unmistakeable form of sexuality and occurring inside of a capsule resembling an egg-shell and termed a cyst. In the vegetative form the amœbæ either simply split in two or their nucleus divides into eight daughter nuclei, each of which takes a portion of the protoplasm so as to form a characteristic brood of eight young amœbæ, which come apart. In the other or sexual cycle the amœba rounds itself off, comes to rest, and contracts and surrounds itself with a gelatinous coat which becomes the cyst wall. The two nuclei, after undergoing reconstruction and chromosomic reduction, divide into halves, which copulate, so as to form two fresh nuclei, each containing half of the two parent nuclei. Each of these copulation nuclei now divides twice and the divisions form eight young amœbæ which, however, cannot leave their cyst until it has been taken in by a new host and has had its wall softened in the stomach and duodenum."[42] The pathogenic entamœba hystolytica differs materially from the foregoing. It possesses a tough ectoplasm which enables it to force its way between the layers of the mucous membrane and produce the undermined ulcers of tropical dysentery. Schaudinn has actually observed the organism in scrapings of the bowel from an experimentally infected cat. "The two sorts of amœba differ also in their reproduction. The pathogenic form in its vegetative stage divides into two or forms new individuals by budding. Brood formation does not occur. The process of encystment is also quite different. It comes on when the patient is beginning to recover from his attack of dysentery and the fæces are becoming solid. The nucleus gives up most of its chromatin in granular form to the plasma and its remains are expelled. The plasma now projects from its surface a number of little knobs, each containing a particle of chromatin and measuring from three to seven micra in diameter. These break off after a while and each becomes surrounded by a capsule which ultimately becomes quite brown, hard, and opaque. These 'spores' are then expelled with the fæces and serve to infect a fresh host."[42]

McWeeney[42] states that so far back as 1902 he believed that the amœba coli or rather, I presume, what we now know as the entamœba histolytica, was causative of one form of dysentery and in the very excellent paper from which I have quoted above he holds that "one of Schaudinn's experiments seems quite conclusive." In this experiment this great investigator, whose untimely death we all deplore, dried a small quantity of fæces from a case of undoubted dysentery in air and satisfied himself microscopically that it contained no cysts of entamœba coli, but only the small brown spores of entamœba histolytica. The cover-glasses were then removed from the slides actually examined and the fæces washed off with about one cubic centimetre of sterile water and administered in food to a young cat whose stools had been proved to be free from amœbæ. Three days later the cat began to pass slimy fæces streaked with blood. These were found to be swarming with typical entamœba histolytica. Next day the animal died from dysentery. The necropsy showed characteristic ulceration of the large intestine with crowds of amœbæ in all stages of penetration into the intestinal wall. Schaudinn administered quantities of the fæces of this cat to another one but it remained healthy. He then gave a small quantity of the dried fæces originally used and within six days amœbæ appeared in the fæces. This cat, which was older and stronger than the first one, developed dysentery and "died in about a fortnight."[42] From this experiment it would appear that amœbæ taken by the mouth appear to be harmless and that "it is to the dried-up, cyst-containing fæces present in dust and water that we must look for the propagation of dysentery." Kruse and Pasquale, as is well known, produced dysentery by the introduction of amœbæ per rectum, but McWeeney considers that this rectal transference can hardly be realised under natural conditions. Whether the amœbæ contained in the fæces from the acute stage will, if gradually dried, become converted into cysts outside the body is not clear, but it is obvious that the dejecta of dysentery must be prevented from getting access to drinking water or being conveyed by flies to food. The entamœba and Shiga's bacillus appear to be antagonistic and both Schaudinn and Castellani[45] have failed to find them in the same bowel.

Bacillary dysentery.—Although it is evident from the

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Such conditions of reduced vitality may be induced by a variety of circumstances, first and foremost among which I would place "chill," which Manson declares to be a "powerful excitant of dysentery,"[24] and Scheube considers, above all things, to be mentioned as a predisposing cause.[23] Next I should place "unfavourable hygienic conditions," such as overcrowding, contamination of the soil with sewage, and an impure water-supply. Epidemics of the disease are therefore peculiarly likely to occur in war and as an accompaniment of famine, and Scheube says, "In almost every long campaign or siege the outbreak of an epidemic of dysentery amongst the combatants, amongst the besiegers as well as the besieged, is a common occurrence."[22] Such epidemics have occurred in all ages, as Munson refers to an outbreak of dysentery in the army of Henry V. at Agincourt,[37] whilst the ravages of the disease during the Franco-Prussian war of 1870 and in the garrison of Ladysmith in 1900 are familiar instances in recent times. Enfeeblement through previous disease is a predisposing cause on which both Scheube[23] and Manson[24] lay great stress, and the diseases which are most likely to be followed by dysentery are the two great debilitating diseases of the tropics, malaria and enteric fever. In this relation Buchanan has pointed out that dysentery frequently forms the "terminal disease" in chronic invalids, such as malarial cachectics, tuberculous invalids, and lepers,[9] and my personal experience in a large cantonment general hospital at Umballa confirms this observation. Next in importance to the foregoing I would place "abuse of alcohol." Scheube says, "inebriates usually have severe attacks,"[23] and the writings of all military observers go to show that the intemperate soldier is the one most subject to dysentery and its most terrible sequela, tropical abscess of the liver. German writers mention such predisposing causes of dysentery as insufficient or superabundant nourishment, disorders of the digestion, hæmorrhoids and excessive venery, but I fail to see how these can act otherwise than by impairing the general nutrition. Finally, all authors are agreed that the ingestion of rotten and indigestible articles of food, and especially unripe fruits, predisposes to dysentery, but these again have no specific action and simply act by exciting a catarrhal condition of the mucous membrane of the intestine and thereby rendering it vulnerable to the various micro-organisms about to be referred to.

With regard to the exciting causes, these are in amœbic dysentery the entamœba histolytica and in bacillary dysentery the bacillus dysenteriæ, "a specific bacillus of which there are various strains."[39] I propose to refer to these two varieties separately, as they are in reality two distinct diseases in which the pathological changes are similar but not identical.

Amœbic dysentery.—This variety is essentially slow-developing in its nature, although acute attacks are not uncommon. It is styled by Firth and others "endemic dysentery," and it appears to have little tendency to break out into definite epidemics, as is the case with the other form of dysentery. The organism producing amœbic dysentery belongs to the animal kingdom and has been placed by Leuckhart in the rhizopoda class of the protozoa, or one-celled animals. An amœba was first described by Lambl in 1859 and subsequently by Loch in 1875, but to Schaudinn is due our present exact knowledge of the genuine organism. He found that many kinds of amœboid organisms occur in the human intestine and that some of these are not true amœbæ at all but merely amœboid stages in the development of the higher forms of the protozoa such as trichomonas, lamblia, and other infusorians. Genuine amœbæ he divided into two classes: (1) those provided with a shell, the thecamœbæ; and (2) those that have no other covering, or gymnamœbæ. "At least one of the former and two of the latter sort are now known to occur in the intestine."[42] The two naked forms are genuine parasites, but one of them is harmless and the other one of the most dangerous of pathogenic protozoa.[42] Schaudinn[41] has re-named the former, hitherto known as the amœba coli, the entamœba and the latter hitherto known as the amœba dysenteriæ as the entamœba hystolytica. The entamœba coli was found in from 20 to 60 per cent. of healthy stools by Schaudinn and is a shapeless mass of protoplasm not showing much differentiation into ecto- and endoplasm but possessed of a well-marked nucleus. It is difficult to find in healthy fæces, as its habitat being in the upper regions of the colon it dies out as the intestinal fæces become firmer on their passage down the bowel. If, however, the downward course of the fæces is hurried by saline purgatives the amœbæ can be readily detected, as Schuberg has shown. "The amœbæ have two distinct cycles of development; one vegetative or asexual taking place in the naked state, the other displaying a primitive but unmistakeable form of sexuality and occurring inside of a capsule resembling an egg-shell and termed a cyst. In the vegetative form the amœbæ either simply split in two or their nucleus divides into eight daughter nuclei, each of which takes a portion of the protoplasm so as to form a characteristic brood of eight young amœbæ, which come apart. In the other or sexual cycle the amœba rounds itself off, comes to rest, and contracts and surrounds itself with a gelatinous coat which becomes the cyst wall. The two nuclei, after undergoing reconstruction and chromosomic reduction, divide into halves, which copulate, so as to form two fresh nuclei, each containing half of the two parent nuclei. Each of these copulation nuclei now divides twice and the divisions form eight young amœbæ which, however, cannot leave their cyst until it has been taken in by a new host and has had its wall softened in the stomach and duodenum."[42] The pathogenic entamœba hystolytica differs materially from the foregoing. It possesses a tough ectoplasm which enables it to force its way between the layers of the mucous membrane and produce the undermined ulcers of tropical dysentery. Schaudinn has actually observed the organism in scrapings of the bowel from an experimentally infected cat. "The two sorts of amœba differ also in their reproduction. The pathogenic form in its vegetative stage divides into two or forms new individuals by budding. Brood formation does not occur. The process of encystment is also quite different. It comes on when the patient is beginning to recover from his attack of dysentery and the fæces are becoming solid. The nucleus gives up most of its chromatin in granular form to the plasma and its remains are expelled. The plasma now projects from its surface a number of little knobs, each containing a particle of chromatin and measuring from three to seven micra in diameter. These break off after a while and each becomes surrounded by a capsule which ultimately becomes quite brown, hard, and opaque. These 'spores' are then expelled with the fæces and serve to infect a fresh host."[42]

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Secondly, to avoid irritation of the inflamed mucous membrane. In this relation I may point out that many years ago Sir William Gull summed up the treatment of acute dysentery in three words, viz., "Rest, warmth, and ipecacuanha." This was not only smart and epigrammatical but it had the advantage of being correct, and Washbourn,[28] after his exceptional experiences in South Africa, has little to add to the aphorism of the great Gull. To avoid irritation of the inflamed mucous membrane we must apply the first two of Gull's trinity of remedies. Rest is absolutely essential and in all cases the patient should remain in bed and use a bed-pan. The frequent stools and tenesmus soon produce coldness of the surface and extremities, so to maintain the individual's vitality he must be kept warm by means of plenty of blankets and hot-water bottles if necessary, and Yeo recommends that opium liniment should be gently rubbed into the abdomen.[29] All foods which leave a residue prone to decomposition must be avoided, and Manson[24] objects even to milk in acute dysentery if the tongue is foul and limits the diet to weak chicken broth, barley, and rice water, with a little egg albumen till the tongue cleans. Milk is, however, considered the best food in all cases by Scheube[22] and Yeo,[29] while Osler[20] recommends "milk, whey, and broths." In my own experience milk can be taken if the stools are watched. It should be boiled or sterilised, diluted with almost equal parts of barley water, and rendered alkaline by the addition of five grains of bicarbonate of sodium or one drachm of saccharated solution of lime to each pint. If curds appear in the stools the milk must be peptonised to limit, so far as possible, the amount of undigested milk passing through the pylorus, but if, notwithstanding this precaution, curds are still present, then it is essential that milk should be given up and the diet limited to whey, broths, and egg albumen. In all cases clear soups flavoured with the juice of fresh vegetables can be given as they leave no residue behind and are most grateful to the patient as a change from milk. Ewart[15] and Nash[26] very strongly recommend this kind of broth in the treatment of typhoid fever and we may take it that in the acute stage dysentery must be treated on much the same lines as enteric fever. Nash says that "too rigid an application of the exclusive milk diet spells disaster in many cases. I can call to mind more than one case of typhoid fever which has been admitted to hospital most desperately ill, not so much through the disease *per se* as through loading of the intestinal tract with massive milk curds producing both harmful toxins and mechanical irritation." Stimulants should not be exhibited as a matter of routine. As Faichnie[16] points out, they are rarely necessary and should only be given in small quantities when the prostration of the patient is very great. A teaspoonful of brandy in a teaspoonful of hot coffee is recommended by one authority.[29]

The third indication for treatment is to attempt to produce intestinal antisepsis. This can, of course, be merely an attempt as the bowel may be regarded as a forest crowded with flora and fauna of the most varied and septic character, but although it may be useless to try to render the intestinal mucosa aseptic it may be possible to place it in a position which will discourage the growth of a delicate organism such as the bacillus of dysentery appears to be. There are three ways in which we may attempt to treat this indication—namely: (1) by saline aperients which sweep all foul accumulations and organisms from the intestinal tract in a more or less mechanical manner; (2) by the administration of certain drugs said to be specific; and (3) by washing out the bowel per anum by means of astringent and antiseptic fluids. In the tropics the best preliminary treatment for all cases of diarrhœa is a dose of castor oil with or without from 15 to 20 minims of liquor opii sedativus, and Manson believes that slight cases of dysentery are often checked thereby and require no further treatment except rest and a bland non-irritating diet for a few days. Having done this the physician must elect whether he will resort to the saline, specific, or lavage method of treatment.

With regard to the saline treatment, this method has many adherents amongst officers of the Royal Army Medical Corps serving in India and in most hospitals in that country one or other of the following mixtures is well known: 1. Magnesium sulphate, one drachm; tinctura zingiberis, ten minims; acidum sulphuricum dilutum, five minims; chloroform and water to half an ounce. 2. Sodium sulphate, one drachm; and aqua fœniculi, half an ounce. The first is Buchanan's original formula and the latter his modification on discovering that sulphate of sodium gave, on the whole, better results than sulphate of magnesium.[7] The mode of administration is to give a tablespoonful of one or other of these mixtures every hour until the motions become fæcal and then every three or four hours for one or two days. If the stools become watery and show no tendency to take on a fæculent character the saline treatment must be promptly stopped, and the ipecacuanha resorted to, and I would point out that Washbourn,[28] from his recent experience in South Africa, regards ipecacuanha and magnesium sulphate as both specifics for the disease but he regards ipecacuanha as the most efficient, as he has seen it cure cases where magnesium sulphate has failed. Personally, I always start with the saline treatment when I can rely on the patient being efficiently nursed and the character of the stools intelligently watched, but in other cases I resort to ipecacuanha, which I consider almost a specific for the disease. We will therefore discuss it under the heading of specifics.

"Specific" treatment.—Scheube[22] says: "The principal drugs used in the treatment of dysentery are calomel and ipecacuanha, the effects of which do not depend solely on their aperient and emetic qualities. The drugs must be regarded as having a 'specific' effect, a fact which does not seem as yet to have been fully acknowledged, at least as far as German text-books are concerned." Manson says he can offer no explanation of the action of any drug in dysentery and admits that we use them empirically, but thinks that "ipecac and simaruba really seem to have some sort of specific action on the disease or its cause, but in what way it is impossible to say." Yeo[29] thinks that ipecacuanha may be microbicidal and arrest the growth of the organism, whether amœba or bacillus, producing the disease, while Fayrer points out that the mortality of all varieties of dysentery in India, which was 11 per cent. before its use, fell to 5 per cent. after its introduction.[12] The method of exhibiting the drug almost universally adopted in military practice in India is to interdict food for three hours and then to give 20 minims of liquor opii sedativus in a small quantity of water. Half an hour after the opium 30 grains of powdered ipecacuanha are given in the form of freshly prepared pills or as a bolus. To prevent vomiting the patient is directed to lie perfectly still in a darkened room and not to drink, speak, or move for three or four hours. He must be cautioned not to swallow his saliva and a nurse should remain by his side with directions to wipe away any salivary secretion on the slightest indication from the patient. Ipecacuanha prepared without the emetic principle was much vaunted at one time, but its use was abandoned by most Indian practitioners before the South African war, when it was extensively used and found most unsatisfactory. I believe Day's remarkable experience of the failure of the drug to cure dysentery was due to his using this preparation.[10] He reported 60 cases in 26 of which he used ipecacuanha *sine emetina* and opium, with the result that nine died, and 32 in which he administered sulphate of magnesium with only one death. Scheube and Kartulis[22] are strong advocates of calomel in the treatment of dysentery, but I have no personal knowledge of its use, as with an experience of several hundred cases I have been so fortunate as to have had only one or two fatal cases under the "saline plus ipecac" treatment. I do not propose to confuse the issue by referring to the numerous other drugs which have been exploited at various times as "specific" for dysentery, as with the exception of Monsonia ovata, advocated by Maberly, their utility does not seem to be well established in the treatment of dysentery in its acute stage.[23]

The lavage treatment.—Osler[20] says "that the treatment of dysentery by topical applications is by far the most rational plan," but I think this statement requires qualification. It is unquestionably a valuable method of treatment, but it is only applicable in subacute and chronic cases, at least in the tropics where the services of skilled nurses are comparatively rarely obtainable. I merely refer to this method for the sake of completeness as the results of the two previous lines of treatment are so good. For instance, Buchanan[29] has treated 855 consecutive cases by salines with only nine deaths, giving a case mortality of only 1·05, and these, I think, are almost as good results as can be hoped for in the treatment of an acute illness.

The fourth indication is to counteract any morbid condition of the blood. This is a most important indication and one which has recently attracted much attention. Where dysentery occurs in a malarial subject quinine must be exhibited in full doses, and Maclean goes so far as to

recommend that 20 grains of quinine should always be administered before the ipecacuanha treatment is begun. The morbid condition of the blood which has recently been shown to be frequently associated with dysentery, especially on the Indian frontier, is, however, diminished alkalinity, which Wright has shown to be a frequent cause of scurvy. It must, therefore, be borne in mind that a condition resembling ordinary dysentery may be simply a variety of scurvy, and it may be well, therefore, to test the alkalinity of the blood by the method advised by Wright in all cases of dysentery in which the origin is obscure. Recently in Somaliland a succession of cases of dysentery were found to be due to "acid intoxication" and were relieved by anti-scorbutic treatment.[41] Yeo[23] says: "In scorbutic cases the fresh bael fruit has been strongly commended by Anglo-Indian physicians. Lemon and lime-juice may also be given and fresh ripe fruits and vegetables, but Leishman states that ten grains of lactate of sodium three times daily rapidly cures all conditions due to diminished alkalinity. The cases of dysentery one occasionally comes across in Indian practice in which native *hakims* are successful by giving abundance of fresh fruit after English remedies have failed are of course scorbutic ones, so the recognition of this indication for treatment is a very important one in every way.

The fifth and last indication is to maintain the patient's strength. This must be done by suitable diet, as indicated under our second heading, and the administration of stimulants in some cases but not as a matter of routine. Few will agree with Yeo's suggestion[23] that port and burgundy may be used in acute cases, and the custom of most physicians in the tropics is to prescribe brandy or champagne in the comparatively rare cases in which alcohol is necessary. "Ether and caffeine hypodermically and saline injections have been employed with success in cases in which life appeared to be endangered by hæmorrhage and anæmia with prostration and collapse."[23] Sparteine has also been used with success.[40] After the very acute stage is over and when the appetite is returning the strength must be supported by a fairly liberal diet. Egg-and-milk flavoured with nutmeg is an agreeable and nutritious food. Pounded sweetbread, chicken, or mutton may be given with strong soups and the many varieties of bland farinaceous food of which rice and bread are the types. During convalescence all indigestible articles of diet should be rigidly excluded, but abundant light, nutritious food allowed and the appetite encouraged by the administration of the various bitter tonics, such as cinchona, gentian, and nux vomica. As with enteric fever, so in dysentery, it must be kept constantly before us throughout the illness that our duty is not merely to the patient but to the community and our first aim in all treatment should be to prevent the spread of the disease, which is undoubtedly communicable, and to do this it is essential that all cases of actual dysentery and also all suspicious cases of diarrhœa should be promptly and efficiently isolated and their stools, clothing, and bedding carefully dealt with as recommended in the section on prevention.

The treatment of chronic dysentery.—We now turn to the treatment of chronic dysentery, a condition all too familiar to physicians who have practised in the East. The indications requiring treatment are here merely three in number: (1) to promote a restoration of the diseased mucous membrane; (2) to counteract any morbid tendency in the blood; and (3) to support the patient's strength by proper diet.

1. Manson's routine[24] in treating all cases of chronic dysentery, a method of which I have had some personal experience, is to give a short preliminary course of ipecacuanha—30, 25, 20, 15, 10, and 5 grains on successive evenings, with rest in bed and milk diet. He then proceeds to give a short course of very small doses of castor oil, with or without opium, three times daily, regulating the dose according to the amount of action produced. If this treatment does good he proceeds to give a mixture of simaruba and cinnamon, with or without some intestinal antiseptic, such as salol or β-naphthol. These measures failing he has to resort to direct topical applications. Osler[20] and Manson[24] are agreed that these are of the utmost value in the treatment of dysentery, but on one important point the two great authorities differ. The latter insists that topical remedies should never be applied when acute symptoms are present, whereas the former gives the technique for their use in the acute stage of the disease. Nitrate of silver injections are now considered by most authorities to be the best form of local application in chronic dysentery, but solutions of quinine are strongly advocated by Osler[20] in amœbic dysentery, this being with one exception the sole instance in which a remedy peculiar to one type of dysentery is advocated by any of the authors I have consulted. The treatment of chronic dysentery by nitrate of silver injections was introduced by Hare of Edinburgh, and first used in England by Stephen Mackenzie of the London Hospital. It has been most efficacious in many cases in my own practice and is best given in the following way. The bowel having been cleared with a dose of castor oil a large enema of warm water with a little boric acid or bicarbonate of sodium added should first be given, and when the whole of this has escaped from 40 to 60 ounces of a solution of nitrate of silver, half to one grain to the ounce, should be introduced by means of a "long tube passed slowly into the bowel, as far as it will go without kinking. It is better to fill the bowel by gravitation, using a funnel and tube rather than a syringe." The patient should be directed to retain the injection as long as possible and if appearing to do good it should be repeated twice weekly. Osler points out that it is quite useless to give small injections of nitrate of silver and states that he has never known argyria to follow the prolonged use of the drug. Indications (2) and (3) must be combated on much the same lines as those indicated above in the treatment of the acute stage. If, as is unfortunately frequently the case, the patient fails to get well notwithstanding most careful dieting and active therapeutical efforts the sooner he is sent to Europe the better, and in such cases the advantages of a course of treatment at Carlsbad or of the system of rectal douching practised at Plombières should be brought to the patient's notice.

Recent bacteriological investigations.—For the purpose of this paper I obtained the following strains of bacillus dysenteriæ—(1) Shiga's bacillus I.; (2) Shiga's bacillus II.; (3) Flexner's bacillus; (4) Vaillard's bacillus; (5) Kruse's bacillus; and (6) bacillus dysenteriæ (non-pathogenic). For the first of these cultures I am indebted to Captain Harvey, assistant professor of pathology, and for the remaining five to Major Fowler, assistant professor of hygiene at the Royal Army Medical College, London. To economise space I have arranged the morphological and cultural characteristics of the various bacilli in the accompanying table which shows clearly their resemblance to, and difference from, the other members of the coli group of micro-organisms. The following points, however, merit brief special references: (1) flagella in dysentery organisms; (2) sugar and caffeine media; (3) agglutination; (4) vitality; (5) clinical bacteriological examination; and (6) evidence of pathogenicity.

Flagella.—The dysentery organisms were at first considered to be non-motile and most of the text-books and earlier monographs state that Brownian movements are marked but flagella are not present.[1] It is, however, now recognised that the bacillus is always motile when recently recovered from the stools and only loses its motility in sub cultures. Vedder and Duval were the first to demonstrate, by a modification of van Ermengen's process, that the bacillus possesses "a number of lateral flagella of great fineness but considerable length."[26] These results have been confirmed by Birt and Eckersley, who have demonstrated flagella in eight strains of the organism, including Vaillard's bacillus.[3] The best method of demonstrating flagella is Stephens's modification of van Ermengen's stain. The following description of the method is by my comrade Captain Grattan of the Royal Army Medical College:—

1. Take a twenty-four hour culture of an actively motile bacillus. 2. Prepare a thin emulsion of the bacilli. 3. Spread on a clean slide. The slide is best cleaned by heating over gauze. 4. Fix for one to three minutes in a mixture of (a) osmic acid 2 per cent. two parts; tannic acid 20 per cent., one part. Do not waste this fluid; pour the excess back into the bottle. 5. Wash off thoroughly. 6. Add a few drops of nitrate of silver solution 1 per cent. which constitutes B solution. 7. Knock off excess of stain but *do not* wash. 8. Add a drop or two of C Solution: gallic acid saturated solution, one cubic centimetre; liquor ammoniæ fort. two cubic centimetres; freshly mixed. The slide should be flushed with this solution very quickly and then washed thoroughly. 9. Dry and mount.

Sugar media.—An alkali albumin called nutrose has been used by various German investigators and by an Australian army surgeon, named Doerr, for preparing the special sugar media above referred to for differentiating the bacillus dysenteriæ from the other members of the coli group. I have used it in these investigations preparing the media from the following formula: Mannite or special sugar, 1 part; sodium chloride, 5 parts; nutrose, 1 part; and water, 100 parts. The nutrose and mannite or sugar are dissolved by

TABLE SHOWING THE MORPHOLOGICAL AND CULTURAL CHARACTERISTICS OF BACILLUS DYSENTERIÆ AND THE ALLIED GROUP OF MICRO-ORGANISMS.*

Micro-organism.	Character.	Motility.	Flagella.	Growth on nutrient agar.	Gelatin stab.	Peptone and salt.	Neutral red shake.	Litmus milk.	Sterile potato.	Agglutination with dysenteric serum.
Shiga's bacillus dysenteriæ I.	Short rod with rounded ends. No spores. Length 1-3 μ.	Motile in recent cultures from stools. Gradually loses motility in sub-cultures.	2-6. Mostly terminal. Rather short and thick.	Semi opaque. Resemble the growth of bacillus typhosus but are more transparent.	Similar to bacillus typhosus, but film which spreads out from puncture usually absent.	Faint haziness which rapidly clears. No indol.	No appreciable discharge of colour.	Becomes feebly acid. After 4 days' incubation acidity has been estimated as equal to 6 per cent. decinormal alkaline solution. No clot.	Transparent or whitish growth, which becomes brownish red or dirty grey, with discoloration of potato at edge in a few days.	Usually only agglutinates with serum from animal immunised by special strain of bacillus dysenteriæ.
Shiga's bacillus II.	"	"	"	Has a characteristic odour called by the Germans "Sperm-geruch."	Growth not seen till 48 hours and then only slight white growth.	"	"	"	"	"
Vaillard's bacillus.	Shorter than Shiga, otherwise similar.	"	Numerous fine, reticulated, very long and readily seen (Birt).	"	"	"	"	"	"	"
Flexner's bacillus.	Similar to Shiga.	"	Long, thick, and terminal.	"	"	"	"	"	"	"
Kruse's bacillus.	"	"	Usually 2 terminal.	"	"	"	"	"	"	"
Pseudo-dysenterial bacillus.	Generally somewhat larger than true dysentery bacillus.	"	Variable.	"	"	"	"	Slightly acid at first. Afterwards slightly alkaline.	"	Very variable.
Bacillus typhosus abdominalis.	Longer than either bacillus dysenteriæ or bacillus coli. "Oval ends" (Muir and Ritchie).	Sub-cultures always very motile.	8-12.	More opaque than those of bacillus dysenteriæ.	Similar, but surface film usually present.	"	"	Slight acidity after some days.	For several days apparently no growth. Later slight pellicle with velvety surface.	*Nil.*
Paratyphoid bacilli.	"	Not so motile as bacillus typhosus but more so than bacillus coli.	Variable.	"	"	"	A, Usually no change. B, Sometimes fluorescence.	Paratyphoid A produced acid like bacillus typhosus and Paratyphoid B produced alkali.	Variable.	*Nil.*
Bacillus coli communis.	Shorter and thicker than bacillus typhosus.	Motility is not so marked as bacillus typhosus.	2-6.	More opaque than bacillus typhosus.	Whiter, thicker, more opaque, and showing gas bubbles.	Indol production marked.	Canary yellow colour produced and gas bubbles	Marked acid and clot.	In 48 hours distinct brownish film which rapidly spreads and becomes thicker.	*Nil.*

* In addition to the culture media and other tests shown in the table the effects of Gram's stain, bile salt broth, mannite nutrose broth, raffinose nutrose medium, salicine nutrose medium, caffeine medium, and agglutination with enteric fever serum were also tried. The effects were as follows. *Gram's stain*: "decolorised" with all nine bacilli. *Bile salt broth*: "acid, no gas" for the first eight bacilli; "acid and gas" for the bacillus coli communis. *Mannite nutrose broth*: "unchanged" for the first five bacilli; "growth and acid" for the pseudo-dysenterial bacillus; "acid" for the last three bacilli. *Raffinose nutrose medium and also salicine nutrose medium*: "acid and growth" for the pseudo-dysenterial bacillus; "unchanged" for the other eight bacilli. *Caffeine medium*: "growth" with the bacillus typhosus abdominalis and the paratyphoid bacilli; "no growth" with the other seven bacilli. On testing with enteric fever serum the agglutination result was "marked" with the bacillus typhosus abdominalis and "*nil*" with the other eight bacilli.

the aid of heat, and after filtration five cubic centimetres of neutral litmus are added. The reaction of the various members of the coli group on these special media is shown in the attached table.

Caffeine medium.—A medium prepared as suggested by Birt in the *Journal of the Royal Army Medical Corps* (vol. v., p. 731) was used and it was found that none of the strains of bacillus dysenteriæ showed any signs of growth, whereas the bacillus typhosus flourished luxuriantly.

Agglutination.—Shiga attached much importance to the agglutination of his bacillus with the blood of a patient suffering from the disease and it was shown that a precipitate was given in dilutions as high as 1 in 200. The reaction is not given during the first week of the disease but from the tenth day onward increases rapidly in favourable cases. As in enteric fever, the dilutions which give agglutination if charted show a curve which indicates the progress of the disease. If a steady rise is shown the progress is favourable but if the agglutination power of the blood remains stationary or diminishes the case usually ends fatally. The value of the test has, however, been greatly discredited during the past two years and Birt says: "Since, however, the serum of dysentery convalescents may clump one or more of the whole series of colon and dysentery groups in higher dilution than Shiga's bacillus itself, it alone is unreliable as a means of identification. This is not the case with the serum of goats immunised against Shigas bacillus."[11]

Vitality.—All varieties of dysentery bacillus are killed by a temperature of 58° C. in an hour according to Birt,[1] or by a temperature of 60° for half an hour according to Firth.[18] It is very readily destroyed by disinfectants, 1 in 20 carbolic acid, or 1 in 2000 perchloride of mercury, destroying it in from three to five minutes. Firth found that bacilli lived on rags for 21 days and Leutz states it will survive in shaded and moist soil for several months.[16] It has lived for 55 days in tap water at ordinary temperature, and for 88 days at a

temperature of 37° C. Rosenthal has recovered the dysentery organism from milk after three weeks, from butter after nine days, and from fruit and vegetables after 11 days, so that the necessity for carefully cooking all food supplies during an epidemic is very apparent.[14]

Clinical bacteriological examination.—Take a small quantity of the mucus and prepare a film in the ordinary way. It will be found that very few organisms are present and in this respect the dejecta differ very widely from normal stools or those of enteric fever or cholera which invariably teem with bacteria. To prepare cultures wash a small quantity of the mucoid material with sterile water and shaken up with a little bouillon; then prepare agar plates either by inoculating liquefied and cooled tubes with a couple of loopfuls or by sweeping a bent rod, moistened with fluid, over agar placed in a Petri dish. Incubate at 37° C. for twenty-four hours and colonies of bacillus coli will appear, but on further incubation at the same temperature for 24 hours small colonies may be seen which will prove to be Shiga's, or some other variety of dysentery bacillus, if these organisms are present.

Pathological evidence of the specificity of bacillus dysenteriæ.—The evidence of the pathogenic effects of the various strains of this organism on man is, necessarily, somewhat small, but if not convincing it is certainly presumptive. Strong reports a case in which a Philippine prisoner under a capital sentence was induced to swallow a culture of the organism. He died from acute dysentery, which set in 48 hours after swallowing the culture, but the value of this evidence is discounted by the fact that the disease was epidemic in Manila at the time. Shiga made an emulsion of one-twelfth part of an agar slope in sterile bouillon and had it injected into his own back. Slight pyrexia resulted and a small abscess formed at the site of the inoculation but no diarrhœa resulted. Shiga's blood serum, however, showed active agglutination with the bacillus some days afterwards. Flexner records a laboratory accident in which one of his assistants accidentally aspirated a small quantity of the fluid culture into his mouth. Notwithstanding prompt expectoration and the free use of a weak disinfectant mouth wash, severe diarrhœa, with bloody and mucous stools, tormina, and tenesmus, developed in 48 hours. On laboratory animals, Shiga, Kruse, Vaillard, Flexner, and Firth[15] have caused marked enteritis chiefly affecting the large bowel and showing various pathological changes identical with those of dysentery. The lesions are best marked in rabbits, cats, young pigs, and dogs. Horses react strongly to inoculation with the bacillus and have been killed by a small dose. The channel of experimental infection which produces the best results is subcutaneous injection. "Ingestion with food and by an œsophageal tube, after preliminary neutralisation of the gastric contents, or exhibition of an irritant have not been successful, while even the direct introduction of pure culture into the small intestine after laparotomy in a dog produced no appreciable result."

Conclusions.—1. I think that we may take it as bacteriologically proven that notwithstanding slight cultural differences the various strains of bacillus dysenteriæ isolated by Shiga, Flexner, Vaillard, Harris, and Firth are simply varieties of the same organism. Bruce's "G Bacillus" resembles them, but I have not included it in my limited observations, as it was isolated from a single case, and when it arrived in England it was almost dead and had to be revivified by prolonged recultivation. In addition to these pathogenic strains of the organism there are several varieties of so-called pseudo-dysentery bacillus which are non-pathogenic and are to be distinguished from the true bacteria of dysentery by the fact that they act on carbohydrates unaffected by Shiga's and the other pathogenic bacilli and they fail to produce enteritis in animals. Whether, however, these bacilli represent degraded or transitional forms of the true bacillus it is, as yet, impossible to say. 2. That symptoms and intestinal lesions identical with those found in man supervene after the subcutaneous inoculation of rabbits with the cultures of the various strains of bacillus dysenteriæ. 3. That the dysentery organisms have considerable vitality. They will live on clothing for at least three weeks and are said to maintain their virulence in damp soil for months. When spread on bread crumbs, or similar articles of food, they survive for about a week. 4. They are, however, very readily destroyed by heat or by weak solutions of perchloride of mercury or the higher phenols. 5. The specific agglutination reaction with the serum of persons suffering from acute dysentery can generally be obtained within two weeks following the onset of symptoms but is often poorly marked. It is, however, of some value and the blood of all patients suffering from a prolonged attack of diarrhœa should invariably be tested with several strains of the bacillus and the stools subjected to a microscopical examination, as my chief desire in this paper is to call attention to the fact that the character of the stools alone is not to be considered as the test of the presence or absence of dysentery.

I think the most important lesson to be drawn from my investigation of the literature on this subject, and my very limited bacteriological work with the organisms of dysentery, is that the profession has only begun to realise its ignorance of a very great subject and that the clinical entities, which we have hitherto styled dysentery, are not one disease but a group of maladies of very varying degrees of severity, ranging from the acute dysentery so familiar to those of us who have served in India or South Africa, to the simple infective diarrhœa which occurs in infants and adults. Simple diarrhœa may be, and often is, an abortive form of dysentery, as has been shown by the work of Dopter and Jurgens during the early part of 1905. During an epidemic of dysentery there are always a number of cases which are in reality dysentery but because no blood appears in the stools are regarded as simple diarrhœa, and it is these cases which constitute a grave source of danger to the community as they may infect others and give rise to attacks of true dysentery. Jurgens has recently examined the stools of 25 cases of simple diarrhœa which occurred during an epidemic of dysentery in a camp at Gruppe.[13] He failed to recover the bacillus dysenteriæ but the serum of one of the cases agglutinated with a strain of the organism. Dopter[13] examined bacteriologically the stools of 11 cases of diarrhœa occurring during an epidemic of dysentery last spring. Seven of these cases were very mild; the bacillus dysenteriæ was, however, recovered from one of them, but the serum reaction in all of them was negative. The remaining four cases did not yield to ordinary treatment and ran a prolonged course, but only symptoms of diarrhœa were observed and no blood appeared in the stools. In one of these cases the bacillus dysenteriæ was isolated but in all the serum reaction was positive. In October last a case of chronic diarrhœa was handed over to me for treatment. The patient was the son of an officer, and aged 17½ years. He went to Egypt with his parents at the age of two years and returned 18 months later. Since then he had resided continuously in England, and until about two years ago had never suffered from looseness of the bowels. Subsequent to an attack of influenza he developed diarrhœa which had gradually got worse but he had never passed blood. When he came under treatment he was passing from six to ten stools daily and was considerably emaciated. I examined the stools and found amœbæ in abundance, but in order to check my work I sent a sample of the stools to the Royal Army Medical College laboratories, where Captain Harvey, assistant professor of pathology, confirmed my opinion that an amœboid organism, probably the entamœba histolytica, was present. The boy has accordingly been treated as a case of dysentery with the most happy results, as he is now passing solid stools after two years of continuous diarrhœa. It is therefore all-important that laboratory aid should be sought in all cases of diarrhœa, whether acute or chronic, as such cases as I have described may, under tropical or active service conditions, become potent factors in the propagation of dysentery.

In the light of this recent work I submit that all cases of diarrhœa occurring in the tropics should be treated with the same precautions as if they were manifest cases of dysentery and in hospital should invariably be isolated and their stools sterilised in some simple form of steriliser, or by means of disinfectants. In the Indian hills all fæcal matter should be received on pine needles and burnt as suggested by me in a communication to the *Journal of the Royal Army Medical Corps*, entitled "The Goux System and its Application to India" (Vol. VI., p. 662). If acute diarrhœa and dysentery were recognised in the service as infectious diseases, promptly isolated, and careful disinfection of clothing, bedding, and stools carried out, I believe we should hear less of epidemics of dysentery both in tropical countries and on active service. The Japanese have shown us a good example in the recent war, as they fully recognised dysentery as a communicable disease with, we are told, the happiest results. In conclusion, I maintain that if we can in future warfare secure for His Majesty's troops a pure, or, at least, an innocuous, water-supply, an intelligent conservancy, and

the prompt recognition and isolation of suspicious cases of diarrhœa we can confidently hope for comparative immunity from the fell disease, or rather diseases which have been the scourge of all armies in the field since the day of Agincourt.

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A CONTRIBUTION TO THE STUDY OF PHLYCTENULAR OPHTHALMIA.

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THE idea that phlyctenular ophthalmia is due to infarctions of dead or attenuated tubercle bacilli has occurred to many clinical observers. It is a hypothesis that suits very well the recognised features of the disease, but no direct verification has hitherto been obtained in support of it either from the histological or from the experimental side. By a recent employment, however, of the delicate methods invented by Sir A. E. Wright and his collaborators for measuring the fluctuations that are produced in the opsonic power of the blood by the invasion of pathogenic organisms, we believe that we are able to throw some light upon this vexed question.

During the past 12 months, acting upon a suggestion of Sir A. E. Wright, we have been testing the opsonic power of the blood against the tubercle bacillus in all cases of phlyctenular conjunctivitis that have presented themselves in the out-patient department of St. Mary's Hospital. The number so examined is now well over 50 and the samples of blood examined amount to nearly 200, so that we may claim to have established a broad basis for our conclusions. A preliminary note on the results was presented to the Ophthalmological Society in November, 1905,[1] in which, without putting forward any very positive conclusion, we were able to announce that the blood of such patients behaved in a manner which was altogether typical of a definite tuberculous infection—that is to say, that its activity in opsonic action on the tubercle bacillus fluctuated in a marked and definite manner above and below the normal according to the progress of the case. Since that time we have proceeded in a more elaborate fashion by procuring the attendance of patients at the laboratory for the daily sampling of their blood, and it is a selection from the much more conclusive data so obtained that we wish to submit on the present occasion.

The blood of a patient suffering from genuine phlyctenular ophthalmia is generally found to be markedly deficient in opsonic power to the tubercle bacillus but not to other bacteria, such as the staphylococcus, at the outset of the case, but if the patient be adequately treated (without recourse to tuberculin, be it understood) the opsonic index rapidly rises and reaches a maximum coincidently with the healing of the ulcers. It then begins to fall rapidly and in a few days is far below the normal, as if from exhaustion of the mechanism. At this low figure it will remain if the observations be continued for an indefinite time, and if, as so often occurs, a relapse takes place the same sequence of phenomena will be reproduced. In a minority of cases, generally older and more vigorous subjects, the opsonic index as regards tubercle will be found to have risen already much above the normal. Here it will remain with temporary falls till healing occurs and then takes a terminal drop as in the former category. We have not yet met with a single exception to this course of phenomena in phlyctenular conjunctivitis.

The simplest type of case is presented in Chart 1. The

CHART 1.

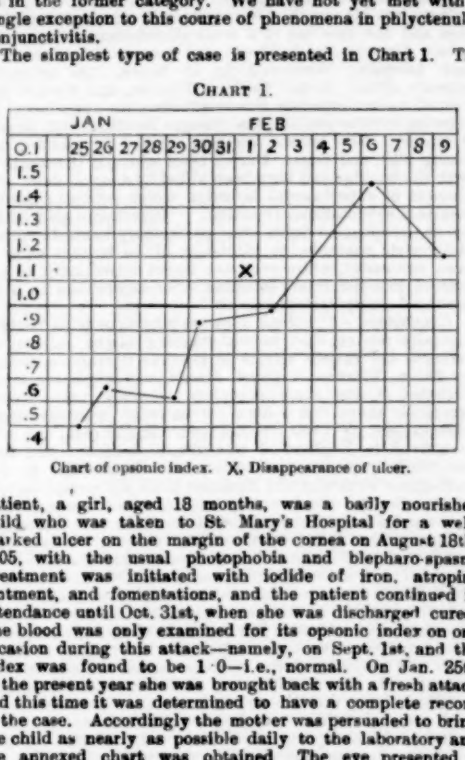

Chart of opsonic index. X, Disappearance of ulcer.

patient, a girl, aged 18 months, was a badly nourished child who was taken to St. Mary's Hospital for a well-marked ulcer on the margin of the cornea on August 18th, 1905, with the usual photophobia and blepharo-spasm. Treatment was initiated with iodide of iron, atropine ointment, and fomentations, and the patient continued in attendance until Oct. 31st, when she was discharged cured. The blood was only examined for its opsonic index on one occasion during this attack—namely, on Sept. 1st, and the index was found to be 1·0—i.e., normal. On Jan. 25th of the present year she was brought back with a fresh attack and this time it was determined to have a complete record of the case. Accordingly the mother was persuaded to bring the child as nearly as possible daily to the laboratory and the annexed chart was obtained. The eye presented a single phlyctenular ulcer on the edge of the right cornea: yellow oxide of mercury ointment was used on this occasion with a mixture of rhubarb and soda internally, the child's

[1] Transactions of the Ophthalmological Society of London, vol. xxvi., p. 252.

digestion being disordered. In a week's time the ulcer had healed and the chart shows that during that time the opsonic index had steadily risen from 0·5 to 0·95. It continued to rise to 1·5 and fell to 1·2. The child was then transferred to the medical department and attended there until the 23rd, when she was discharged. We have not seen her since.

No very palpable tuberculous lesion could be detected in this child, though the usual surmises may be made as to the existence of enlarged mesenteric glands and so forth. In the present state, however, of our knowledge as to the effect on the blood of declared tuberculous disease it is difficult to believe that such a chart could be derived from a patient without a slumbering focus of tuberculous disease somewhere in the body. The great majority of cases of phlyctenular ophthalmia yield charts of this type.

Chart 2 is a less pronounced instance of the same class. The patient, aged 10 years, was a healthy-looking boy who came to St. Mary's Hospital on Jan. 9th of

CHART 2.

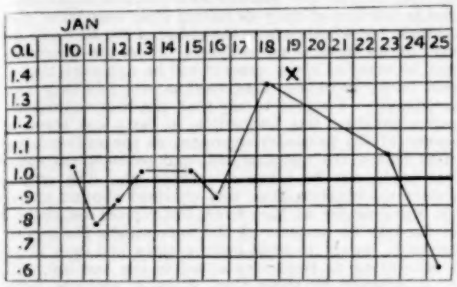

Chart of opsonic index. X, Disappearance of ulcer.

the present year with two marginal ulcers on the right cornea and three on the left. His clinical history was good, but he had undoubtedly had two attacks of the same affection before. Treatment was begun with yellow oxide ointment, fomentations, and iodide of iron. By attendance at the laboratory a very satisfactory chart (Chart 2) was obtained; the opsonic index was found to hover around the normal for several days and then rose to 1·4, to be followed by the usual terminal drop to 0·67. The ulcers began to improve after four days' treatment and were gone in a week. On August 3rd this boy returned to the hospital with a doubtful kind of conjunctivitis on the outer side of the left eye said to have followed a blow. Arrangements were made to obtain a fresh chart, but had to be abandoned from press of other work. Three samples of blood were, however, tested as follows: August 3rd, 0·47; August 4th, 0·74; August 6th, 1·20; therefore, this was probably the development of another ulcer which would have followed the usual course.

A condition which occurs in 8 or 10 per cent. of the cases is shown in Charts 3 and 4. Here the patient's blood is found to be far above the normal in its opsonic power towards the tubercle bacillus, presumably from having risen before the patient comes under observation. It is generally older and more vigorous patients who show this prompt reaction. Chart 3 is that of a girl, aged 14 years, who had just recovered from an attack of chicken-pox. She presented two typical ulcers on the right eye and one on the left. A history was given of a former attack a year previously and some enlarged glands could now be felt in her neck. Treatment consisted of a mixed ointment of yellow oxide and atropine fomentations and iodide of iron. Through the goodwill of the patient an excellent chart was procured; and in view of the anomalous figures obtained great pains were taken with the estimation of the blood, which we believe to be quite correct and free from errors of technique. If there be any value whatever in the method of research elaborated by Sir A. E. Wright and his co-workers this is a surprising example of the results which it yields. Clinically there was nothing remarkable about the aspect of the case and yet the blood was undergoing these marked variations in its composition or activity. It will be seen that at first the opsonic index ranged from 1·6 to 1·8; then from what we are tempted to consider an over-production of the protective substance, what Sir A. E. Wright has denominated a "negative phase," ensued; and the opsonic index fell on two successive days to 0·47. So surprising was this that the samples of blood were worked twice over. A final rise took place to 1·7 and the ulcers healed. Feb. 10th was a Saturday and the estimation of the blood was finished before the patient's arrival on Monday; from the figure of the opsonic index it was predicted that the ulcers would be quite healed, as was the case. On the strength of our experience we can

CHART 3.

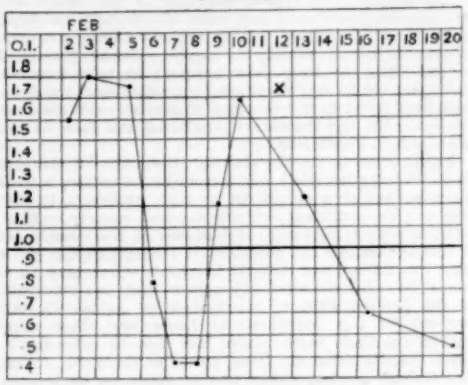

Chart of opsonic index. X, Disappearance of ulcer.

CHART 4.

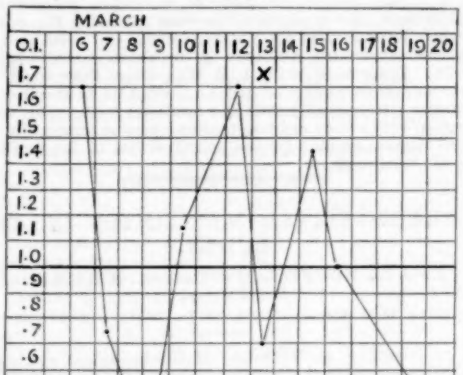

Chart of opsonic index. X, Disappearance of ulcer.

now foretell either the speedy healing of an unpromising looking case or the probable delay in the final cure of a comparatively trivial one. Never in our experience do phlyctenules get well without this rise in the opsonic power.

There is not room on the chart to display an interesting relapse which this girl had. From Feb. 20th her index continued to fall until on the 25th it descended to 0·30—that is, practically, her serum had no opsonic power on the tubercle bacillus. On the 27th she developed a fresh phlyctenule in the left eye; on March 6th the index had risen again to 1·75, and on the 7th this ulcer too disappeared. The patient now developed a gumboil and boils in the axilla and was ill for a week. This did not affect in the least the index to tubercle which was again 1·75 on the 13th; from this point it declined until at her weekly visit on the 20th it was 0·45. From this it rose again to 0·85, when her attendance at the hospital finally terminated, she being then in good health. To those who have not followed the researches of Sir A. E. Wright and his school upon the subject of the opsonic power of the blood these figures may seem unmeaning; but to others they are full of significance and it is difficult to escape

from the conclusion that in this patient we were studying the vagaries of a genuine tuberculous infection.

Chart 4 is that of another girl, aged 16 years, from whom we were able to obtain a very complete record. The clinical notes of the case are missing, but it needs no comment. It is introduced principally to show a second instance of the sudden intermediate drop which we have ascribed to over-production of defensive substance; in this case there was no relapse.

The foregoing are typical examples of the results which we have obtained from a long series of carefully investigated cases of this affection, treated without having recourse to tuberculin, which would, of course, vitiate the results. Several times we have been tempted to have recourse to this agent but have always found the established methods of treatment equal to the occasion if carefully and assiduously applied. We may therefore characterise the cases as on the whole left to themselves.

Before entering on any elaborate discussion of the phenomena we have described, our first desire, of course, is to have them verified or contradicted by other observers, to whom, however, we would suggest one caution—namely, not to be satisfied with mere casual estimations of the opsonic index in this or that case but to follow it through to the end and face the labour and trouble involved, which may be considerable. All we shall say now is that our observations in the present state of our knowledge go far to furnish support for the hypothesis of Leber and other eminent authorities that these ulcers are due to attenuated or dead bacilli escaped from some unidentified focus of tuberculous disease, either free or taken up by leucocytes and not having sufficient vitality to generate a typical tuberculous lesion at their new site.

The starting point of this investigation was the occurrence of a certain number of cases of undoubted phlyctenular ophthalmia among patients who were attending the pathological laboratory of St. Mary's Hospital for treatment of various tuberculous affections by regulated doses of tuberculin. It appeared to Sir A. E. Wright that the coincidence was more than accidental and he invited us to examine the subject systematically with the result set forth. For much sympathetic advice and assistance we have to tender him our best thanks, as also for the unlimited use of the facilities of his laboratory.

CEREBRO-SPINAL MENINGITIS IN THE SUDAN.

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IN recording an epidemic of cerebro-spinal meningitis which occurred in the Nubian desert at the recent railhead of the line into the Dongola Province, it is with the hope that my notes may be of interest to those who have been following the recent reports in THE LANCET on this disease and may perhaps be of some value to those who may at any time meet with this fever. My excuse for wishing to publish these cases must be credited to the fact that even the most incomplete notes on an epidemic of this kind must necessarily be of some use in diagnosis when we consider how variable in its onset and course this form of meningitis can be and how grave the after-effects may prove to the patient.

The epidemic under notice comprised 22 cases which extended over the months of June, July, and August, 1905. The cause of the outbreak could not be traced, but coincident with this epidemic there were a few isolated cases in Halfa and one or two suspected cases of the same disease at the Suakin railhead. Though most of these other cases that were reported as being meningitis were among the workmen on the construction of the new lines and among men who might have been in contact with them at any time, yet there were several instances of the fever in men who had not been near the railway and had not run any risk of infection from others who had. It has been suggested that the disturbance of the earth in making the railway has been the means of setting the diplococcus free. This would not hold in the case of those who had not been near the railway and probably the disease is not directly contagious or transmitted by clothing or through excretions. The end of May and the month of June comprise the hottest and most trying period in the year in this part of the Sudan, the shade temperature being usually about 112° F. and often four or five degrees higher at midday and at night falling to 70° or perhaps to 60°. During this time also the dust storms (*haboobs*) are very trying and add greatly to the general discomfort from the heat.

The predisposing causes of the epidemic undoubtedly were over-exertion and long hours of manual labour in the blazing sun. Though the natives were concentrated in small tents they generally, if not always, slept outside the tents, and even had they slept within it would have only been what they are accustomed to in their own villages where they crowd together in mud huts with little or no ventilation or light. The chief predisposing cause seems to have been the hard work during the midday. The native is accustomed to resting out of the sun during midday; consequently the extra work and long hours suddenly thrown upon him in the railway construction were responsible for his falling a victim to this condition. The fact that there have been several isolated cases of cerebro spinal meningitis during this June and July at the new railway headquarters at Atbara may point to the time of the year having some connexion with the outbreak, but whether from the rising of the Nile and Atbara rivers or no there is no evidence. From the symptoms and signs in many of these cases it will be apparent that many could hardly have been diagnosed as such had they occurred sporadically. I regret to say that the routine treatment of lumbar puncture was impossible to carry out through the absence of the necessary apparatus at the railhead, and for a like reason the microscopical and pathological examinations could not be taken advantage of. The only post-mortem examination that was obtained showed characteristic signs as far as they went, but further necropsies were not feasible on account of the antagonistic feelings of the natives in regard to such examinations and even in regard to submitting to treatment at all in the hospital. It may be of interest to know that it is a common belief in the Sudan that when a man is unconscious or delirious he is supposed to have devils in the head, and the only way to drive these devils out is by collecting as many of the women of the village as it is possible to congregate around the sick man. Then these women, with the help of the tom-tom and the weirdest screechings, certainly drown the wildest delirium of any one patient, because the din that is made can only be imagined by any who have been unfortunate enough to hear it. These wailings and screechings continue for hours, and when one thinks of the intense headache that these patients suffer from, it is evident why they quickly die when they become ill enough to deserve this treatment.

The majority of the Kereima workmen had never before been to a hospital or seen an English medical man, and through fear and ignorance they lied to every question and gave the most inaccurate statements concerning themselves and their symptoms. Even when they know the hakim (doctor) and of their own accord report themselves at the hospital their statements are worthless; but in the days when they feared the hospital and everything connected with it their history as obtained from them and their relatives was worse than useless. Thus it was impossible to get any detailed account of their previous history or of the onset of symptoms beyond the immediate signs which were apparent to the dullest intellect. What information was given by the patient or by his friends or relatives was wholly untrustworthy.

Symptoms.—As far as could be obtained with any accuracy the history previously to admission amounted to the following. Four of the patients had vomited, one had had nausea, eight had complained of having been constipated for seven, two, and three days respectively, and two had complained of pain in the abdomen. What was noted concerning the remaining cases can be seen in the appended tabulated summary. Of the 22 patients treated in the hospital, 20 had been working at the railhead. Out of these, no less than 11 had been at work on the day previous to admission, and of the 11, three had been at work on the day of admission. 11 out of the 22 patients were between the ages of 17 and 22 years; of the remaining 11, two were said to be 40 years old and the other nine were between 23 and 35 years of age. The majority were badly nourished and weakly-looking individuals, though in a few cases (e.g., Case 6) the reverse condition held true. A nasal discharge was present in Case 18 only. In Case 10 the patient had a well-marked secondary syphilitic eruption

over the legs and arms, and the subject of Case 19 had guinea-worm in his right leg. With these two exceptions all the patients had been healthy up to the time of the present illness.

On admission six patients were found to be unconscious and two were delirious. Three refused to answer any questions or to take any notice of their surroundings. All who answered questions complained of pain in the head and neck and those who denied any pain (owing to nervousness at first) showed only too well its existence on the slightest touch or movement of the head, and in the rigid way in which these parts were maintained. Those who denied any pain at first acknowledged its existence after a day or two (when conscious). One said that the pain was confined to the frontal region and one localised it at the occiput. Six complained of pain in the back as well and two complained of abdominal pain also. Vomiting occurred in eight cases and nausea in one. Two said that they had severe pain in the knees and elbows and one complained of pain in the left shoulder. Eight were markedly restless and two were very irritable. The rigidity of the head and neck was marked in 16 cases, and of the remaining six patients one had general rigidity and two had slight rigidity (both of whom became delirious shortly after admission and died in hospital). Of the other three cases there were no notes as regards the rigidity, but all three patients died, one being unconscious when brought to the hospital and the other two showing great pain on any movement of the head or neck. Retraction of the head was marked in 14 cases; was said to be slight in one case (Case 10) in which the patient became delirious and died; was absent in two cases (Cases 1 and 7) in which both patients were unconscious and succumbed; and was not remarked upon in Cases 9, 18, 20, and 21 (all of which were fatal in five, three, three, and five days respectively). Of the cases in which there is no note as to retraction recovery took place in one only (Case 13).

The temperature averaged 102° F. and the pulse 90 on admission, the latter being full and of low tension. The tongue was dry and coated with a white and often brown fur. The teeth and lips were covered with sordes. The chest and abdomen showed nothing abnormal. The spleen could not be palpated.

In no case was there any form of rash to be detected. The dark skin would make any erythema or slight rash very difficult to detect.

The nervous signs were as follows. Kernig's sign was present in both legs in 16 cases and in the right leg only in one case (Case 22). Of the remaining five cases, two patients (Cases 1 and 19) were unconscious and died without regaining consciousness. In Cases 11 and 18 there was no note concerning this sign. In Case 12 the patient was so markedly restless that it was impossible to be sure of the sign and this remark applies also to Case 18, the patient being very irritable upon the slightest touch.

The knee-jerks were not noted in Cases 1, 8, 9, 12, 18, and 19. Of these six cases the first patient died within a few hours; the second recovered; the third, fourth, and fifth died on the second, the fourth, and the third days respectively; and the sixth died from pneumonia. Of the remaining 16 cases the subjects of Cases 7, 10, 14, 16, and 20 had no knee-jerks throughout, while in Cases 4, 5, 11, 21, and 22 the knee-jerks were retained and were exaggerated in Case 5. In four cases the patients recovered their knee-jerks on the nineteenth, seventh, sixth, and eighth days respectively, while in Cases 6 and 13 the knee-jerks were lost on the eleventh and fourth days respectively.

Herpes labialis appeared in seven cases—that is, roughly 32 per cent. of the cases admitted—at an average of five days from the date of the onset of symptoms.

Twitchings of the face muscles were present in Cases 7 and 20; in Cases 5 and 7 the patients picked at the bedclothes; in Case 5 there were marked flexion of all limbs and extension of the back; twitchings of the fingers occurred in Case 12; in Case 14 the patient grabbed continually at imaginary objects in the air; in Case 6 there was weakness of the muscles around the right angle of the mouth; in Case 3 incontinence of urine; in Cases 4, 5, 6, 7, and 12 incontinence of fæces; and in Cases 13 and 14 retention of urine.

With regard to paralyses of the cranial nerves, paresis of the right external rectus muscle developed in Case 16 on the second day and paresis of the muscles at the right angle of the mouth on the sixth day. In Case 12 the patient developed ptosis of the right eye on the fourth day. In Case 17 weakness of the right external rectus muscle was noted on the fifth day after admission, or the fifteenth day from the beginning of the illness. The pupils were fixed and contracted in Cases 1, 3, 9, and 12; all of these patients were brought to the hospital in an unconscious condition. In Case 6 the patient was similarly affected but was conscious, though very restless. In Case 21 the patient became unconscious on the third day and was found also to have fixed and contracted pupils. Of these cases recovery resulted in Cases 3 and 6 but the remainder ended fatally.

The following complications occurred. In Case 19 the patient developed pneumonia on the fifteenth day, from which he died. There were no cases of the headache persisting after discharge from the hospital, although several patients had left the hospital with a certain amount of pain and rigidity, but all these that were seen or heard of afterwards had completely recovered. Pain in the joints was complained of in Cases 3, 5, and 8, but no swelling or heat was detected. Two patients (Cases 6 and 13) lost their knee-jerks on the fourth and eleventh days from admission. In Case 8 conjunctivitis developed on the eleventh day of illness. This rapidly got well. The cachexia was very marked but recovery was complete in all cases that were seen or heard of afterwards. The average duration of illness in the cases in which recovery resulted worked out at 14·5 days roughly, the average of the cases that ended fatally being roughly five days. The case in which pneumonia developed is not included.

The mortality in this epidemic was as high as 13 out of 22, which is roughly 59 per cent.

The post-mortem examination which was held upon the first case showed both cerebral hemispheres to be deeply hyperæmic and red. The membranes were thickened and adherent. The brain substance was very soft. Scattered over both hemispheres was a fibro-purulent effusion, especially marked along the larger sulci of the convexity and to a less extent over the spaces at the base of the brain. There was no marked dilatation of the ventricles nor was there any pus in them. Further examination was not possible.

Remarks.—Since I commenced this paper it has been my lot to see another, but milder, epidemic of cerebro spinal meningitis at Atbara, the Sudan railway headquarters. Like last year, this epidemic began in the month of June and spread over July and August. As regards the general symptoms and signs of this year's epidemic there has been nothing of further interest to add to this report beyond the fact that post-mortem examinations were carried out on all the fatal cases. Two of this year's patients are stone deaf, resulting directly from fever. There is no perforation of the membrana tympani in either case. The general character of this outbreak has been similar to last year's epidemic.

At the post-mortem examination the following conditions were found. There was marked injection of the pia-arachnoid. The membranes were thickened and very adherent. The whole of the cerebral hemispheres were plastered over with a fibro-purulent fluid and in the course of the larger sulci and fissures there was much lymph. At the base of the brain there was even more and thicker purulent matter. The cord was also involved and the cervical portion was especially affected, as indeed were also the dorsal and lumbar regions. The ventricles were dilated with a turbid fluid and in the posterior cornua greenish thick pus was present. The above signs were present in those fatal cases in which the patients had lived up to the third day. The appearance of those cases which succumbed within a day or two showed little beyond a hyperæmic and softened condition of the cerebral hemispheres.

The symptoms were remarkably similar in most of the cases of this year and last year, the variability being rather in the acuteness or mildness of the attack than in a different type of the disease. Thus in one case death occurred within 24 hours, but the onset of this case was in no wise different from the many other cases some of which ended fatally in four or five days and in some of which recovery followed. Thus the onset of the majority of the cases was sudden, beginning with headache, somnolence, and refusal to talk or to take food, there being in some cases vomiting and in others a feeling of nausea. Abdominal pain was complained of in a few cases and constipation was the rule. Several of the patients became delirious or were found to be unconscious without any previous signs having been observed. On examination of the subjects of unconsciousness no retraction of the head was marked, though the head and neck were usually

more or less rigid. The head was occasionally held to one side. The pupils were equal, fixed, and contracted. The tongue was dry and completely coated with a white fur. The temperature was invariably raised, sometimes being as high as 105°. The pulse was characteristically slow in proportion to the temperature.

Irritability and restlessness were usually a feature of the disease. Those patients who complained of anything invariably said that the pain in the head and neck was severe. Others had pain in the abdomen and in the joints but apparently never of any severity as compared with the pain in the head and neck. Loss of knee-jerks throughout the illness proved to be a bad sign. On the other hand, three of the patients who died had knee-jerks throughout but one of them had exaggerated knee-jerks. It would appear from a study of these 22 cases that non-recovery of the knee-jerks within a week of the onset of the disease is an unfavourable sign. Thus loss of knee-jerks early in the disease is a bad sign, especially when not regained within eight days of the onset. But it must be acknowledged that the knee-jerks from the very beginning of the disease were present in three of the fatal cases, as against two cases in which recovery resulted. The two patients who lost the knee-jerks and failed to regain them did so coincidently with a relapse of the temperature. Loss of control of the sphincters may be recovered from.

Treatment.—As stated above, lumbar puncture was not performed owing to having no needle for the purpose. The longest hypodermic needle always failed to withdraw more than a few drops of blood-stained serum. Ice bags were placed to the head, and cold water sponging and wet packs were used when the patients were very restless and when the temperature was above 103°. Strychnine hypodermically and nutrient enemata were used in those cases requiring such measures. Phenacetin and antipyrin relieved the headache when used in doses of 15 grains repeatedly in the milder cases. Chloral and morphine had to be used when the patients were very restless and when the headache was very severe. Catheters had to be passed in Cases 13 and 14 for retention of urine. Rectal feeding was only resorted to when the patient was unconscious or delirious or refused to swallow anything. Vomiting was persistent in no case. Quinine had no effect and salicylate of sodium seemed to be of no benefit to the joint pains. Cannabis indica seemed to have some effect in Cases 2, 13, 15, and 19,[2] but in Cases 4, 14, and 16 it had apparently no effect in lowering the temperature or in improving the condition. In Cases 6 and 13 there was recurrence in the rise of temperature after an initial fall following upon administration of cannabis indica. The chief treatment of the patients consisted in hydrotherapy together with a light nourishing diet, and treating the separate symptoms as they arose.

I have read with great interest the treatment of cerebro-spinal meningitis suggested by Dr. A. W. Hare in THE LANCET.[3] Granted that all the symptoms and signs of epidemic meningitis are due to pressure, cervical laminectomy would seem to be the radical form of treatment. From a careful study of these two epidemics of this form of meningitis, both from a clinical standpoint and from the knowledge gained by the necropsies on these recent cases, it would appear that mechanical pressure alone will not account for all the signs and symptoms. In many cases, too, the symptoms and signs are apparently due to a general infection, and this is verified by some of the post-mortem examinations which do not show any great excess of fluid. The irregularity of the temperature is best shown by the accompanying charts which are fairly typical of the cases seen in the Sudan.

Summary of 22 Cases of Cerebro-spinal Meningitis.

Case.	Age.	Retraction.	Rigidity.	Knee-jerks.*	Kernig's sign.	Nervous signs.	Result.†
1	21	Absent	Neck	—	—	—	D
2	22	Present	,,	Absent	Present	—	R
3	21	,,	,,	,,	,,	—	R
4	35	,,	Neck and back.	Present	,,	—	D
5	40	,,	General	,,	,,	Picked at bedclothes; arms flexed.	D
6	19	,,	Neck and back.	,,	,,	Right external strabismus and weakness of right facial muscles.	R
7	40	Absent	Neck	Absent	,,	Picked at bedclothes; twitchings of right facial muscles.	D
8	27	Present	,,	—	,,	—	R
9	25	—	—	—	,,	—	D
10	21	Present	Neck	Absent	,,	—	D
11	18	,,	,,	Present	—	—	R
12	20	,,	,,	—	—	Ptosis of right eye and twitchings in fingers.	D
13	17	—	,,	Present	Present	—	R
14	22	Present	,,	Absent	,,	Grabbed at imaginary objects in the air.	D
15	35	,,	,,	,,	,,	—	R
16	30	,,	,,	,,	,,	—	D
17	35	,,	,,	,,	,,	Right external strabismus.	R
18	21	—	,,	—	—	—	D
19	23	Present	,,	—	—	—	D
20	25	—	—	Absent	Present	Twitchings of facial muscles.	D
21	35	—	—	Present	,,	—	D
22	20	Present	Neck	,,	,,	—	R

* The knee-jerks are marked as present or absent according as they were found on admission.

† D = death; R = recovery.

REMARKS.

Case 1.—The patient, who had been at work on the previous day, was brought to hospital unconscious and in a collapsed state, with laboured breathing. The temperature was 102·4° F. and the pulse was rapid and weak. The head was held rigidly to the left. Died in 24 hours. Post mortem examination on head only.

Case 2.—The patient had been at work on the previous day. He was admitted to hospital with severe pain in the head and neck. He had vomited bile twice. Temperature 104·6°; pulse 100. He became delirious and afterwards was very drowsy. When seen six months afterwards was quite healthy.

Case 3.—The patient, who had been at work on the previous day, was unconscious when admitted to hospital. Temperature 101·2°; pulse 70. He urinated unconsciously, developed pains in both knees and ankles, and had herpes labialis. When seen two months later he was healthy.

Case 4.—The patient had been ill for a day with pain in the head and neck. On admission to hospital he was very irritable. Temperature 104·8°; pulse 120. He had difficulty in swallowing; became delirious, and passed his motions under him.

Case 5.—The patient was working up to the time of admission, when he complained of headache. Temperature 102°; pulse 90. Shortly after admission he had pains in all joints and especially acute pain in the neck. Nausea and marked extension of whole body were present. The patient passed his motions under him.

Case 6.—The patient had worked on the previous day, but had fallen asleep (?) on returning to camp and had not spoken up to the time of admission to hospital when he was found to be very restless and generally to lie in the prone position. Temperature 98·6°; pulse 60. He developed herpes labialis and passed his motions under him.

Case 7.—The patient, who had worked on the previous day, was brought to hospital for colic. Temperature 100°; pulse 70. Within a few hours of admission he became delirious and passed all his motions unconsciously to the time of his death.

Case 8. The patient came to the hospital with a history of having had fever and severe pains in the head for seven days as well as constipation. The pain was confined to the occiput only. On admission the temperature was 103° and the pulse-rate was 96. He was seen four months later when he was quite well.

Case 9.—The patient had been ill for three days and had vomited. He was brought to the hospital in an unconscious state with a temperature of 103·6°. He became delirious shortly after admission and was fed per rectum. Morphine had little effect on the delirium.

Case 10.—The patient had been ill for one day. He had vomited twice and he complained of nausea and pain in the head, the neck, and all over his back. Temperature 102°; pulse 140. There was a secondary syphilitic eruption on the limbs and body. He became delirious and vomited bile. He was fed per rectum.

Case 11.—The patient had been constipated for two days but had had severe pain in the head and neck for one day only. He had vomited bile once. On admission the temperature was 101·6° and the pulse-rate was 56. The attack was a very mild one.

Case 12.—The patient had worked up to the time of admission, when he complained of pain in the abdomen. Temperature 105°; pulse 70. He usually assumed the prone position. He soon became very restless and could not then be roused to speak or to eat. He vomited twice. Was delirious and passed his motions under him.

Case 13.—The patient had worked on the previous day. He vomited mucus once. After admission the temperature was 103·6° and

[2] It is worth noting that this patient had apparently recovered from the meningitic symptoms, and the recurrence of the high temperature with collapse directly followed upon the extraction of blood which had been carried out by the patient's friends without the knowledge of the medical officer. Pneumonia then set in and the patient succumbed to this complication.

[3] THE LANCET, July 14th, 1906, p. 123.

CHART 1.

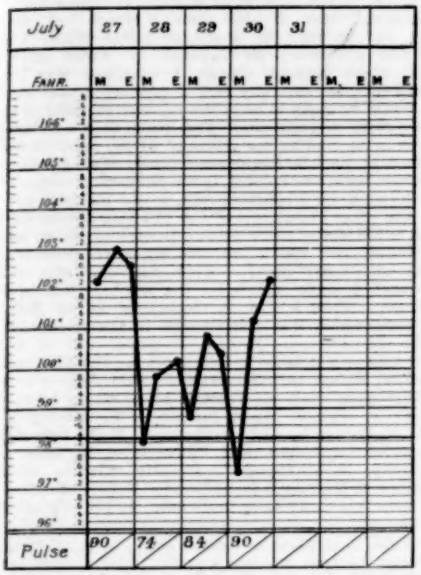
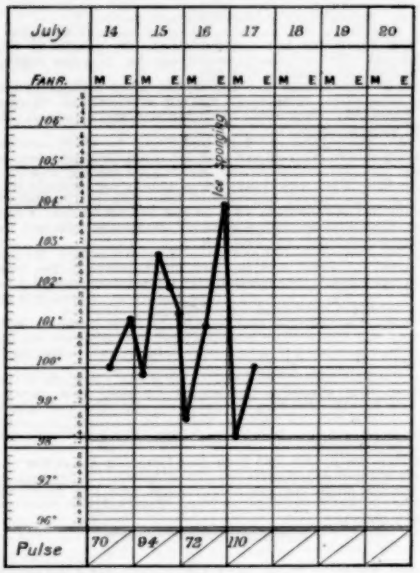


CHART 2.



The above charts show acute cases which ended fatally.

CHART 3.

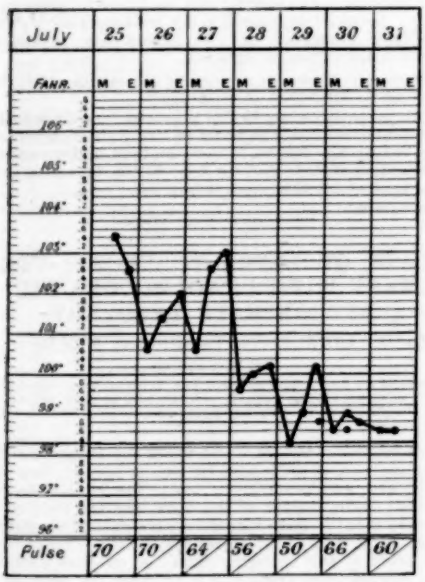
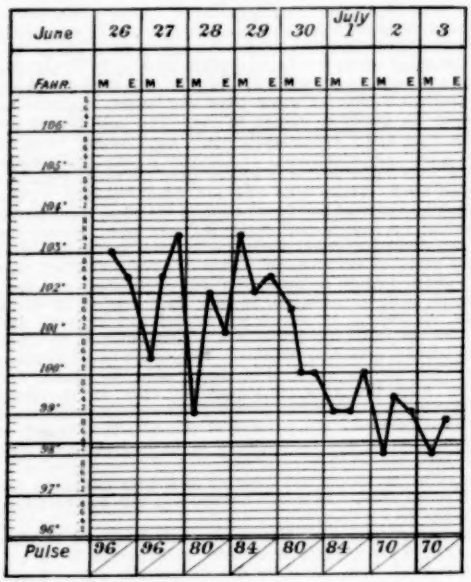


CHART 4.



The above charts show acute cases in which recovery resulted.

pulse-rate was 70. Frontal headache and pain in back were complained of and there was retention of urine. Herpes developed on the lips and chin. The patient had a relapse.

Case 14.—The patient had been ill for six days and had vomited twice. On admission the temperature was 104·6° and the pulse-rate was 110. There was very severe pain in the head, the neck, and the back, and abdominal pain also was complained of. There was frequent epistaxis. The patient became delirious and had conjunctivitis in the right eye. Before death corneal ulcers were present.

Case 15.—The patient had been ill for three days with pain in the head and neck. He had vomited twice. On admission the temperature was 105·4° and the pulse rate was 70. Bile was vomited and herpes labialis developed on both lips.

Case 16.—The patient was unconscious when brought to hospital, having been ill for three days. He was very restless. Temperature 102°; pulse 130. He vomited twice and was very collapsed. He was infused with salt solution.

Case 17.—The patient had been constipated for three days and had had severe pain in the head and neck for seven days and some pain in the back also. On admission the temperature was 103° and the pulse-rate was 120. When seen three months later he was perfectly healthy.

Case 18.—The patient had suffered from pain in the abdomen for two days before admission, when he was noticed to have a nasal discharge. Temperature 103·2°; pulse 70. He soon became very irritable and shortly afterwards was delirious.

Case 19.—The patient had worked on the previous day. He had been constipated for three days and had guinea worm in the right leg. Nausea was present. On admission the temperature was 103·8° and the pulse-rate was 60. He vomited bilious fluid once. Herpes was present. He had been bled by a friend. He died from pneumonia.

Case 20.—The patient had worked on the previous day. On admission the temperature was 104·6° and the pulse-rate was 120. He was quite conscious but complained of acute pain wherever he was touched.

Case 21.—The patient had been ill for a day with pain in the head and neck. After admission he vomited bile once. Temperature 103°; pulse-rate 90. He was very irritable and complained of pain in the head, the neck, and the back, as well as in the knees and arms. He was delirious and then became comatose. Blood and albumin were present in the urine.

Case 22.—The patient had been found running about the desert in delirium without any clothes on. On admission the temperature was 103° and the pulse-rate was 130. On the next day he became unconscious and had to be fed per rectum. Herpes labialis developed.

Atbara, Sudan.

THE INDIGESTIBILITY OF PLUMMER'S PILL.

BY SIR JAMES SAWYER, M.D. LOND., F.R.C.P. LOND., F.R.S. EDIN.,

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A FEW months ago, in a case of coarse disease of the spinal cord in the person of a male adult, I decided to exhibit mercury internally. I prescribed for him a Plummer's pill of five grains (pilula hydrargyri subchloridi composita, B.P.) to be swallowed three times daily. After a few weeks of this medication I increased each dose to two of these pills and these were taken three times daily for several weeks. No physiological effect of hydrargyrum appeared. Then the patient brought to me some of the pills which he had been passing per anum for some time and which incident he thought he ought to report to me. The pills passed per anum were easily recognisable upon examination by their size, colour, and consistency as Plummer's pills; their shape was a little flattened and elongated from the usual spherical pilular form. These pills had not been "coated." The patient said that he had found them in his fæces many times. That the Plummer's pill of the B.P. can pass through the human alimentary canal unchanged is quite new to me, after many years of practice, in which I have prescribed this pill often. Such a possibility is, of course, of much moment and significance in the therapeutics of those cases of disease in which we employ hydrargyrum, and appears to call for immediate communication to one's professional brethren, together with such considerations and observations as I have been able to make and record with the view of explaining such an important therapeutic mishap and of pointing out some reliable means for its avoidance. The passage of this pill from mouth to anus unaltered, and its voidance in its original mass with the fæces, may explain some instances of failure in remedial medication in which this form of mercurial treatment had been relied upon. As is well known, this pill has been long used and very widely.

In conjunction with Messrs. Southall Bros. and Barclay, Limited, I have made a number of experiments in examination of the solubility of Plummer's pill. A pill, quite freshly made according to the B.P. formula, was digested in water at a temperature of 100° F. for 36 hours, and at the end of that time was found to be unchanged, appearing to be quite insoluble in water under the conditions of the experiment. The B.P. formula for the pill orders, of mercurous chloride and of sulphurated antimony, each one ounce; of guaiacum resin, two ounces; of castor oil, 180 grains; of alcohol (90 per cent.), one fluid drachm or a sufficiency. These have to be mixed "to form a mass," and the official dose of this mass is from four to eight grains, in the form of a pill or pills. When I found that this pill could be digested in water at 100° F. for 36 hours without change I examined the Pharmacopœial formula carefully and I concluded that the fault of it would be likely to be in the mixture together of alcohol and the resin of guaiacum. This resin, as is well known, is soluble in alcohol to the extent of 91 per cent. (Royle and Headland); and it would seem likely that a mixture of guaiacum, resin, and alcohol, in the proportions ordered in the B.P. formula for Plummer's pill, would be likely to "set" with the other ingredients of the pill into a resinous mass, which could resist the digestive powers of water, as in my experiment, and resist, too, the digestive powers of the human alimentary canal. Upon realising this startling experience I made search for the original formula of Dr. Plummer. This I was so fortunate as to find in a rare book which was discoverable in the splendid library of the Birmingham Medical Institute. It is a small octavo volume published in Edinburgh *circiter* 1752, entitled, "Medical Essays and Observations, Published by a Society in Edinburgh," vol. i. Therein, at p. 42, is to be found Plummer's original paper, headed, "An Alterative Mercurial Medicine: by Andrew Plummer, M.D., Fellow of the College of Physicians, and Professor of Medicine in the University of Edinburgh." In this valuable essay the author's own formula is to be found. Notwithstanding some archaisms it is easily to be made out. In the original it is as follows:—

℞. Sulph. aurat. Antimon. Calomel. non pp. a. Drach. ii Calomelas in crassum pulverem redactum lævigetur super marmor, per vices addendo Sulph. Antimonii portionem à diuturno tritu fiat pulvis subtilis. Dein.

℞. Pulver. præcedent. Unc. sem. Gum. Guaiac. Drach. iii. Resin. Gudiac. Drach. i Balsam. Capvvi q. s. ut fiat massa pilularis ex cujus singulis Drachmis formentur Pilulæ xii.

Pills made according to this formula also remained unchanged after digestion in water at a temperature of 100° F. for 36 hours.

Of course, in the method of digestion used in my experiments the conditions of human gastro-intestinal digestion were not closely imitated; but I think the test herein described is a fair one for an approximate conclusion as to the probability of the activity of a medicament given by the mouth. I venture to suggest to my brethren that instead of prescribing Plummer's pill we should use a magistral formula in the following terms:—

℞. Hydrargyri Subchloridi, Antimonii Sulphurati, aa., gr. j; Resinæ Guaiaci, gr. ij; Syr. Glucos q. s. ut fiat pilula.

A pill made according to this improved formula is found to disintegrate completely in water at 100° F. in 90 minutes.

My thanks are due to Messrs. Southall and especially to Mr. Bennison of their staff for help in the numerous experiments upon which this paper is founded.

Birmingham.

A CASE OF LEPRA TUBEROSA; TREATMENT WITH CHAULMOOGRA OIL; APPROXIMATE RECOVERY.

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THE following case occurred under my immediate observation and care at the lazaret for men at Sydney, New South Wales, and was recorded by me. The clinical notes are classified under regions of the body, and the state of each region at each of three successive surveys is given under the letters A, B, and C for easier comparison. These surveys were made at the following dates: A on June 23rd, 1904, B on August 28th, 1905, and C on Sept. 1st, 1906, so that the second and third were each held at intervals of about a year.

The patient was a soldier, aged 65 years. He was born in

England of English parents about 1839; he enlisted in 1860 and was stationed in Ceylon; in 1863 he was ordered with his regiment to New Zealand, and in 1866 to Sydney; having been then ordered to England he took his discharge and joined the New South Wales forces, with which he served continuously till 1902, when he was retired. Throughout this term of about 35 years he lived at Sydney, except for four years during which he was stationed at Bathurst, New South Wales. He was married, and had had nine children, of whom the youngest was 19 years old. About 1874 he had pleurisy and somewhere about the same time a venereal sore. With these exceptions he had always had good health.

History of the illness.—After his discharge the patient visited England, whence he returned during April, 1904. He stated that he continued in perfectly good health until some date during the voyage to Australia, when his steamer was within the tropics. He then noticed two red lumps on his forehead, which he identified with tuberosities present on his admission at the inner end of each eyebrow. He said that they appeared suddenly and painlessly; they were not present when he "turned in" one night and were noticed the next morning. Since then other lumps had appeared on his face and spots on his body and limbs. During the preceding month or so he had noticed swelling of his hands. He denied occurrence at any time of malaise, febrile attacks, nose-bleeding, &c., and of all other signs of ill-health. He had no suspicion of the nature of his illness.

State on admission and subsequent course.—Hair.—A, June 23rd, 1904. The hair of the scalp had fallen in accordance with the patient's age; that of the eyebrows was thin; elsewhere it was normal. B, August 28th, 1905. The eyebrows had almost completely fallen; elsewhere the hair was normal. C, Sept. 1st, 1906. The eyebrows had reappeared. On the right side the growth, though moderate, was in the patient's opinion what it was before illness; individual hairs were stout, some were long, and as a whole this eyebrow might be pronounced normal. On the left side the growth had not become quite so completely restored but was not evidently abnormal.

Head and neck.—A. The scalp over the vertex was bright red (congested) but smooth and in all other respects normal. The eyebrows, malar eminences, alæ nasi, chin, and submental tissues were infiltrated. There were many scattered tuberosities, especially on the forehead and brows. The lobe of the left ear was infiltrated. B. There was nothing abnormal about the head and neck; especially was there no infiltration anywhere. The sites of tuberosities formerly present on the forehead were marked by well-defined, but faint, red stains which would hardly escape observation but which would not detain attention. C. No signs.

Nose.—A. The nose was partly obstructed. B. No note. C. Always free.

Trunk.—A. There were several maculæ on the posterior aspect of the trunk, many of which were greatly thickened; they were generally distributed, circular or oval in outline, and varied from the size of a sixpence to that of a florin; they had slightly desquamating margins, were reddish in colour, and some of them were paler at the centre; several of these pale centres, but not all, were anæsthetic. B. The front of the trunk exhibited only a little pityriasis about the sternum, where there was a thick growth of hair. On the back were about a dozen oval maculæ; they varied in diameter between one and two inches; they had well-defined, but not sharp, edges; their colour, which was uniform and faintly red, may be likened to a slight blush. There was neither thickening nor desquamation. C. No signs. There was no pityriasis.

Arms and thighs.—A. Many maculæ. B. No maculæ. C. No maculæ.

Forearms and hands.—A. Both hands were cyanosed; the fingers were swollen and tactile sensibility was much diminished. There were many scattered tuberosities. B. The skin of both forearms was reddened, on the left side more than on the right; the cuticle was smooth and rather shiny. In both hands the same signs existed and were more marked; they were more pronounced in the right hand. There were no swelling and no wasting of the intrinsic muscles of the hands. No tuberosities could be found on or in the forearms. C. The skin of the outer and posterior aspects of the *right* forearm was about normal; the skin over the elbow-tip was voluminous, but had normal texture and colour; that of the back of the hand was of a rather bright red, but this could hardly be pronounced abnormal. The skin of the *left* forearm and hand in the corresponding regions was red and slightly roughened; it did not visibly desquamate. The skin over the elbow-tip was voluminous and carried extensive red stains, but seemed to be in process of reversion to the normal.

Ulnar nerves.—A. Both were hard and comparatively insensitive. Both were freely moveable; strong pressure caused no evident discomfort, but sensation was correctly referred. If very sharply rolled momentary contraction of some muscles of the hand was caused. B Both ulnar nerves were round, smooth, and rather hard at the notch; they were quite fully sensitive and were perhaps even a little tender. On pressure sensation was correctly referred on both sides. C. On the *right* side the nerve was normal in consistency and size at the notch; yet it could be traced upwards for about three inches, though not easily. It was quite normally sensitive and on pressure sensation was correctly referred. On the *left* side no abnormality of this nerve could be detected.

Buttocks.—A. No note. B. No note. C. On the right side was a faintly red, oval macula, about two inches in horizontal diameter, by one inch broad; the skin was perhaps thinned, but the cuticle was not desquamating. On the left side was a similar spot of the size of a sixpence and circular.

Thighs.—A. Some maculæ B. There were two or three reddened spots about the right kneecap, which had no definite character. C. No signs.

Legs and feet.—A. No note. B. The lower extremities were perfectly normal. C. No external signs.

Peroneal nerves.—A. No note. B. Perfectly normal. C. Both nerves were decidedly larger than normal, and the right nerve was larger than the left; these changes were slight but definite. Both were normally sensitive, and on pressure sensation was correctly referred.

Sensation.—A. In removing the clothes the fingers worked clumsily and the patient said they were numb. B. There were maculæ on the back. A very light touch (such as should tickle) was not felt; the slightest tap was felt, and the place was located by the patient with near accuracy. He said that the right finger and thumb were numb; however, he used an ordinary sewing needle without difficulty, though not with his former expertness. C. The skin of the back was tested with a needle which was applied at points about an inch apart, in perpendicular lines which extended from the shoulders to the loins at intervals of about two inches. If the cuticle were penetrated, though without drawing blood (this could often be felt by the observer, but not seen), the patient said that the sensation was natural, but he did not flinch; yet here and there at about half a dozen spots which were in no way visibly distinguished he did flinch. Perhaps, therefore, there was some general blunting of sensation, but the conditions of the experiment were uncertain. Tactile sensibility in the fingers was tested by covering with a cloth five shillings, of which four were good impressions, while the fifth was nearly smooth; with either hand he selected the smooth coin in about the time taken to do so by healthy persons. Sensation in the skin of the feet and ankles appeared to be normal.

Bacillus lepræ.—A. It was abundant in lymph from three tuberosities on the forehead and was present in lymph from merely infiltrated parts of the eyebrows. B. No note. C. The bacillus was not found in films made with lymph from the right eyebrow and from the back of the left hand; it was not found in swabbings from the nasal mucous membrane.

Sweat function.—A. No note. B. No note. C. (Observed by the senior resident medical officer, Dr. D. Wallace.) Sept. 11th, at 11 A.M., the temperature of the room was 22·2° C.; under the tongue it was 37·7° C. (shortly after a hot bath); the pulse was 112. One-third of a grain of muriate of pilocarpine was injected under the skin of the right forearm. At 11.10 A.M. the scalp was moist; the patient was sweating freely on the face, except over the malar eminences. The anterior aspect of the external ears was dry. As regards the trunk, the back was only moist; the anterior surface of the trunk, the arms, forearms, hands, fingers, and the whole of the lower extremities were all sweating freely (except the horny soles of the feet). At 11.20 A.M. the malar eminences were very slightly moist. At 11.25 A.M. the back was sweating visibly (beads), but the reaction was less marked about the scapular region. The gluteal surfaces were very moist. The transversely elongated macula was slightly less moist than the neighbouring skin; a red spot not visible before made its appearance nearer the middle line, and sweated as freely as the rest of the gluteal region. At 11.30 A.M. the reaction was waning. The temperature of

the room was 25·2° C.; under the tongue it was 37·2° C.; the pulse was 112. The only parts which remained absolutely dry were the anterior surfaces of the external ears. Sweating was delayed and slight over the malar eminences; and the gluteal regions became very moist only.

Treatment.—On July 4th, 1904, the patient was admitted. On the 7th gurjun oil was given. He began with 20 minims a day; in the course of 13 days this was increased to 80 minims a day; by Dec. 12th he was taking 270 minims a day. This course was occasionally interrupted owing to disturbances of the digestive system. On Dec. 13th chaulmoogra oil was given. He began by taking 45 minims a day, divided into three doses; this was gradually increased until by Sept. 23rd, 1905, he was taking 270 minims a day, which on the 24th was increased to 315 minims a day. This he took for a week, but on account of general pains and malaise was compelled to reduce it again, so that on the 30th he began to take 150 minims a day. This he gradually increased to 195 minims. On Dec. 4th the patient began to take a pill containing $\frac{1}{16}$th of a grain of strychnine three times a day; the dose was rapidly increased till it reached $\frac{1}{12}$th of a grain taken thrice daily, which he continued till the end of his stay. At the same time the chaulmoogra oil was again increased until it amounted to 270 minims a day. On August 1st, 1906, he reduced the chaulmoogra oil to 195 minims a day and continued to take this dose to the end of his stay.

[*Note.*—As soon as I came to consider the question of releasing this patient, and to decide on the recommendation I should be justified in making to the Board of Health of New South Wales in view of the law of Nov. 26th, 1890, which directs the segregation of lepers under administration of the Board, I submitted him to Danielssen's test. He took ten grains of iodide of potassium three times a day during 15 days. No alteration in his condition was produced. Ultimately he was released on Sept. 20th, 1906.]

The patient was an intelligent man, of considerable force of character; he devoted himself to his treatment, which included frequent hot baths. The chaulmoogra oil was received from Horner and Sons of London; it was referred to the analytical laboratory of the Department of Public Health and was reported to have responded to the recognised tests and to be genuine. The doses were measured with considerable accuracy; they were administered in gelatin capsules which were ascertained to hold about 15 minims each. I have found it necessary to allow patients themselves to regulate the quantity taken. If it be too great they complain of pains about the body, probably muscular, which are especially felt in the loins and thighs, of some breathlessness with consequent difficulty in walking either fast or uphill, and of general malaise. The quantity which can be tolerated without discomfort varies in different individuals.

Degree in which complete recovery was approached.—This patient cannot be reckoned as completely recovered. At the date of discharge his right ulnar nerve was still so far enlarged as to be just traceable for three or four inches above the elbow-joint; both peroneal nerves were enlarged and they were of unequal size; the skin of the left elbow and of the posterior aspect of the left forearm and hand was hardly normal in appearance, though possibly only slightly congested; he exhibited the remains of a macula (then devoid of characteristics) on the right buttock; and the sweat function had not become completely restored over the malar eminences. It may be hoped that convalescence will progress until complete recovery has been attained; but as yet it cannot even be said that the disease has entered on a stage of assured quiescence. The evidence on this last point consists in invasion of the peroneal nerves for the first time during the last year.

It is impossible to convey accurately in words the impression which direct clinical examination affords, and the remarks last made above seem to me likely to excite an erroneous idea of this patient's state at the time of his release. I therefore venture to mention the following opinion. Were he now to present himself to a physician of experience with leprosy, but on account of some other disease I do not think any suspicion that leprosy in any form was, or had been, present would be aroused in the physician's mind.

Could a diagnosis of leprosy now be established?—But were the man presented for a decision on the question whether recovery from leprosy had really taken place then, I think, such a physician must give a reply in the negative, and could even establish his opinion firmly. He could do so, however, only if he were in the habit of examining such cases in a way, and by a means, which, to judge from the innumerable clinical accounts on record, are not generally employed.

(*a*) The way is systematic examination of the peripheral nerve trunks as a matter of routine. In the accounts referred to these are most often omitted from mention; and if their condition be noted, then it is done only by way of adding one additional item to the complex of signs and symptoms from which the diagnosis must be deduced. But I now submit that such alterations as have been mentioned above (in this case of the peroneal nerves) suffice by themselves to suggest a diagnosis of lepra when they are exhibited in a person who otherwise is in apparent good health. In declared cases such alterations are always to be found if they are looked for, also they occur very early, and I doubt whether they may not be the earliest sign of infection.

(*b*) The means referred to is the subcutaneous injection of a salt of pilocarpine. I think that the appearance under the influence of pilocarpine of more or less dry areas of skin, intermingled with areas over which sweating occurs in normal degree, always affords strong ground for suspecting leprosy, while dryness of the wrists and hands and of the ankles and feet, when it occurs under that influence, is decisive.

Relation between the stage of recovery attained and the treatment.—The date at which the infection was taken cannot be fixed. The possibility of its having been received in New South Wales must be admitted, because indigenous cases have now been recorded there, many of which have occurred under my own observation. But the patient's previous residences in Ceylon and in New Zealand cannot be overlooked, although a very long latent period would be implied if it were assumed that he had become infected in either of those countries. Nor, in my opinion, can the date at which illness began be surmised. The long period of latency which is generally conceded to leprosy, and which I believe very frequently obtains, together with the well-known frustrate forms of the disease, point to insidious beginnings of the active stage. I think it possible in this case that the infection may have long remained in a state of subactivity, during which it either caused no recognisable symptoms, or else slight symptoms which accrued so slowly as to have been obscured in the patient's mind by custom, so that he failed to become aware that his sensations were in any degree abnormal. But the date at which the active stage began was fixed with certainty within a week or two; and the rapidity with which the details of the clinical picture were filled in was only less remarkable than that with which they faded. By these features a temporary and unexplained loss of resistance seems to be indicated, together with its speedy restoration; or, if the sudden appearance of the disease process in full activity be supposed to have been due to an accidental release of the bacillus from the nidus in which it had been subtly maintaining itself, then in the rapid recovery may be perceived evidence of persistence through all of a high degree of resistance.

In my own experience gurjun oil is practically valueless in the treatment of leprosy. If this be a correct view, then the great improvement recognised at the second survey had occurred after only eight months' treatment with chaulmoogra oil. All the tuberosities, both cutaneous and subcutaneous, had then disappeared, the maculæ had in part disappeared and in other parts were greatly faded, the ulnar nerves had resumed their sensitiveness, and the former numbness of the digits had become much less. Besides taking this medicine, the patient led a regular life and enjoyed a full diet; but his circumstances before admission were such that the value of these advantages was not great to him. Now, although chaulmoogra oil always seems to do some good, it has not in my experience done in any other case as much good as was observed even at the second survey in this instance. But, on the other hand, no other patient has pushed it to the same extent; or, if that be not quite exact, at all events no other patient has shown the same obstinate determination to recover if by the means at his disposal recovery might be compassed. As regards his additional treatment by strychnine he did not begin it until ten months before his discharge; and although I am unaware of any ground for ascribing specific properties to this drug it should be noted that it was

during this term and two earlier months (namely, after August 28th, 1905) that the peroneal nerves were invaded for the first time.

Whatever the value of chaulmoogra oil as a remedy for lepra may be, on the whole I feel obliged to express the opinion that it would not have produced the excellent results recorded in this case unless the patient had possessed an unusual inherent power of combating the infection.

Sydney, New South Wales.

A CASE OF EXTENSIVE RUPTURE OF THE TRACHEA WITH COMPLETE DETACHMENT OF THE LEFT BRONCHUS WITHOUT EXTERNAL INJURY.

BY J. LESLIE BARFORD, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE HOUSE SURGEON AT KING'S COLLEGE HOSPITAL.

AN exceedingly well-developed boy, aged four years, was brought to the out-patient department of King's College Hospital, having been run over by a four-wheeled, half-loaded van some 25 minutes previously. His face was smothered in blood, which was flowing freely from his mouth, and he was in great distress, crying out loudly and throwing himself about. He presented the following features:—

1. *Dyspnœa.*—Respiration was mainly abdominal, neither side of the chest moving well. The diaphragm descended with very increased violence and suddenness, the abdominal muscles contracting in fixing the thorax so that the abdomen appeared very distended and was tense and hard. Later, there was slight hiccough.

2. *Cyanosis.*—This was peculiar in that (1) it was intermittent, and (2) it affected chiefly the head, the neck, and the arms, the trunk and lower extremities being of almost normal colour. During the intermissions of the intense cyanosis the child was of a fairly good colour and presented none of the usual appearances of shock. The veins of the neck were prominent and pulsated forcibly.

3. *Hæmoptysis.*—Blood was passed from the mouth without any great effort. It was bright arterial blood even during the attacks of cyanosis and was mixed with a good deal of froth and mucus. The hæmorrhage ceased soon after admission. There was no vomiting.

4. *Restlessness.*—This was well marked. The child would not lie still, now sitting up, now getting on to his knees and hands (? to help to fix the thorax), now standing, lying, or rolling about. He cried out and resisted being undressed very vigorously.

5. *Surgical emphysema.*—This was noted directly after admission, being most evident over the manubrium sterni and the root of the neck, especially on the left side. It rapidly extended to the face which had a bloated appearance, the lips, the cheeks, and the eyelids becoming emphysematous. This, added to his bloody visage and livid hue, presented a startling enough picture.

Examination revealed absolutely no sign of external injury but a very superficial graze below the left nipple. There was no damage to the head, the mouth, or the tongue. There was no evidence of fractured ribs, each side of the chest being equal in size and range of movement. Percussion elicited no sign of pneumothorax or of fluid in either pleural cavity. The heart was normal in position. The pulse was regular, 140, of small volume and low tension—"running." The abdomen was full and tense; there was no dulness in the flanks or loss of liver dulness. Fæces and urine had been evacuated involuntarily.

The throat was cleared of blood and the boy was inverted, which proceeding temporarily at first relieved the cyanosis. The signs did not seem to demand a tracheotomy and the child was at once carried to the ward. Here his condition, especially as regards the restlessness and cyanosis, became worse. Oxygen was given. Suddenly, after he had sat up, the cyanosis became extreme, and, in spite of inversion, artificial respiration and oxygen, the pulse became indiscernible and death ensued. There were a few inspiratory gasps after the heart sounds had become inaudible. He died about 45 minutes after the accident.

A post-mortem examination on the following day revealed no head or abdominal injuries. The surgical emphysema, which immediately after death was still present all over the head, the face, the trunk, and the upper extremities, had now practically disappeared in these situations, but was present in the cellular tissues of the anterior mediastinum and of the root of the neck. There was no pneumothorax. These conditions—presence of surgical emphysema with absence of pneumothorax—are interesting, as they have been noted in other cases. The pericardium and heart were normal. The left pleural cavity contained a little blood. The fifth, sixth, and seventh ribs of the left side were fractured close to the spinal column. The parietal pleura over the fractures was torn slightly but the corresponding surface of the visceral pleura was undamaged. The left lung was not lacerated at all externally. In parts it felt solid but was everywhere crepitant. The bronchioles were full of blood and blood had extravasated into the lung substance which appeared extensively bruised. The right pleura contained no blood and the lung was not apparently injured but the bronchial tubes were full of blood. A mass of dark clot was found around the great vessels at the root of the heart, and, the heart having been removed, the left bronchus was found to be completely detached from the trachea at the point of bifurcation of the latter; the tongue, larynx, and trachea having been separated from above downwards and removed with the lungs a rupture of the trachea was found extending from the point of bifurcation for fully an inch up the posterior surface along the left extremities of the tracheal rings, which themselves were uninjured. The detached left bronchus was also torn down its length posteriorly. The œsophagus and spine showed no injury. The stomach was very full of food and altered blood.

The causes of death present interesting features. The dyspnœa was probably due to combined causes—viz. (1) the partial non-apposition of the trachea and left bronchus, the left lung being thus thrown partly out of action; (2) blockage of the bronchi and bronchioles of both lungs with blood; (3) impaired action of the left side of the chest owing to the fractured ribs; (4) deficient expansion of the left lung from bruising and consolidation with blood; and (5) impaired action of the diaphragm from acute over-distension of the stomach, vomiting of food and swallowed blood being possibly prevented by impairment of the nervous mechanism. The cyanosis was peculiar in affecting chiefly the head and upper extremities, indicating obstruction to the superior vena cava rather than a more general derangement of circulatory or respiratory functions. Its intermittent character could be explained by the fact that the child in his efforts at times succeeded in bringing the bronchus and trachea into better apposition again. The fact that the blood escaping from the mouth was brightly arterial even during considerable cyanosis seemed to indicate some injury to the lower air passages. The restlessness, combined with the cyanosis and crying out, resembled very markedly the signs of pulmonary thrombosis, and these features were likely enough due to pressure of blood (and air) on the thin-walled pulmonary artery.

Another possible cause of the cyanosis and dyspnœa was pressure of the inspired air escaping from the ruptured trachea into the posterior (and anterior) mediastinal space and passing up the neck within the fascial sheath inclosing the trachea and œsophagus. This air would tend to compress the trachea and the vessels at the root of the neck. If death were due to blockage of the bronchial tubes the patient could justly have been said to have been drowned in his own blood, while if pressure of extravasated air were the main cause he was actually strangled by his own breath.

Another possible factor was injury to or pressure of blood (and air) on the vagi and on the cardiac plexuses around the root of the heart. The sympathetic cords might also have been involved. This would perhaps account for the cardiac failure preceding the respiratory.

There is a specimen (No. 178) in Guy's Hospital Museum of a bronchus ruptured at its bifurcation just within the lung. It also is a left sided rupture and occurred in a woman, aged 51 years, "brought in dead (type of accident not particularised) with fractured ribs and lacerated lung."

For permission to publish this account I am indebted to Mr. A. Boyce Barrow and to Dr. Norman Dalton.

King's College Hospital.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—Sir Edgar Speyer will preside on Monday, March 11th, 1907, at a festival dinner at the Whitehall Rooms, in aid of the National Hospital for the Paralysed and Epileptic and its Nervous Diseases Research Fund.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF SIMULTANEOUS RUPTURE OF A CAROTID ANEURYSM AND AN ATHEROMATOUS AORTA.

BY E. L. SANDILAND, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER TO THE BETHNALL HOUSE ASYLUM, CAMBRIDGE ROAD, N.E.

THE patient, a woman, aged 77 years, was admitted to the Bethnall House Asylum in August, 1905. She was suffering from alcoholic dementia. When examined on admission her heart was found to be normal except for some accentuation of the aortic second sound. She had no physical signs of aneurysm, but the arteries were hard and thickened. The case was considered to be one of arterio-sclerosis, with chronic interstitial nephritis. During the year the patient had several attacks of syncope in which she became unconscious for varying periods. On Oct. 15th, 1906, at dinner, she was eating a piece of bread when her hands fell to her sides and she became unconscious. On the immediate arrival of the medical officer she was found to be dead. Death was surmised to be due to a fatal attack of syncope.

Necropsy.—On opening the pericardium some blood and serum were found to be present. The right ventricle was flabby and relaxed, while the left was firmly contracted. Neither of the ventricles contained any blood. The membrana ovale on the septum auriculi was bulged in towards the right auricular cavity like the finger of a glove. The aortic valves were thickened at their attached margins and there was some atheroma round the roots of the coronary arteries. The arch of the aorta showed some general dilatation, but there was no definite aneurysm. On opening the aorta throughout its length more atheromatous patches were found. One of these situated below the roots of the great vessels on the posterior wall had given way. The rupture was V-shaped and marked out the limits of the patch, one limb extending down to just within the limits of the pericardium. Hæmorrhage had taken place into the tissues in front of the bifurcation of the trachea. On removing the brain extensive hæmorrhage was found spreading all over the base beneath the arachnoid membrane. The blood clot being washed out from the cisterna basalis, the exposed arteries at the base were found to be degenerated extensively. An aneurysm of the left internal carotid was present between its entry through the skull and its division into the anterior and middle cerebrals. This aneurysm was three-quarters of an inch in diameter and fusiform in shape. It had ruptured on its outer aspect, causing the basal hæmorrhage. The rupture was three-eighths of an inch long. The atheroma of the arteries extended along their branches deep into the cerebrum. As regards the other organs, the kidneys showed advanced cirrhosis; the liver was large, greasy, and tough; and the spleen was tough and fibrous.

This case seems to be of great rarity on account of the simultaneous rupture of both the aorta and the carotid. Had one ruptured first the lowering of the blood pressure should, according to physiological teaching, have precluded the rupture of the other. The conclusion is that both occurred simultaneously.

Cambridge-road, N.E.

A CONVENIENT TEST FOR THE PRESENCE OF BINOCULAR VISION.

BY A. FREELAND FERGUS, M.D. GLASG.

FOR the testing of the presence or absence of binocular vision there are already ample means. In addition to Hering's apparatus we have the useful instrument designed by Claud Worth which for the investigation of this important function leaves little to be desired. The pictures devised by him which seem to me to be the best for the purpose are the circles. One can at once tell whether any patient has the sense of binocular vision by simply getting his answer to the question of whether the outer or the inner circle appears to be the nearer. By changing the position of the circles the surgeon can at pleasure cause the outer or the inner to appear the nearer to a person gifted with fully developed binocular vision, and thus if invariably a patient answers correctly there is then no doubt as to his perception of the third dimension. The only objection to Worth's instrument is that it would cost a great deal to have a sufficiency of instruments to meet the requirements of a clinique where a very large number of squint patients are in attendance. Moreover, there are obvious difficulties in the way of a patient using such an apparatus in his own house.

Stereoscopic exercises must in many cases be carried on for a prolonged period if the best results are to be obtained after operations for squint. Most of the stereoscopes in ordinary use are, to my mind, unsatisfactory. Take, for example, Doyne's elaborate instrument or the more simple one of Landolt, both of which at one period I used extensively. With these we can test whether a patient can see with both eyes at the same time, for if he does he sees both the upper and the lower half of the figure, and by a little adjustment he can arrange the two halves to make one figure. But it is to be observed that the two halves appear at the same distance from the observer and therefore neither of these instruments gives any information as to whether the person being examined has the consciousness of the third dimension of space. These instruments have, however, certain uses; for example, they can be employed to train the convergence, positive and negative, but they do not serve for testing the sense of perspective. One of the most convenient methods of investigating this is afforded by those ingenious pictures which are called plastograms. These may be said roughly to consist of two superposed pictures of the same subject taken from slightly different points of view. One of the pictures is printed in green and the other in red and they are looked at through glasses similar to those employed by Professor Snellen for the detection of simulated blindness of one eye. If binocular vision with the perception of the third dimension be present, so soon as the spectacles are worn a stereoscopic effect is obtained at once.

How can we ascertain that the patient has the consciousness of the third dimension? It avails nothing to ask him if certain objects appear nearer than others. Just as a man examining a picture knows that some objects are nearer than others, so the person examining the plastograms can easily tell without having the perception of the third dimension that some objects in it are meant to appear closer to him than others. For example, he knows that a statue must be nearer to him than the building behind it. All doubt on the matter can easily be dispelled by asking the patient to sway himself slowly from side to side while examining the plastograms. Anyone who does so and who has fully developed binocular vision will find that the objects in the foreground appear to move in the same direction as he moves. If he shuts one eye this apparent movement at once ceases; the condition of its being present is that both eyes are used simultaneously. It is to be observed that some of the pictures are much better adapted for the purpose than others, and before using any particular picture the surgeon should satisfy himself of its suitability.

Glasgow.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

LONDON HOSPITAL.

A CASE OF CÆSAREAN SECTION FOLLOWED BY THE REMOVAL OF A FIBROID TUMOUR WHICH FILLED THE PELVIC CAVITY.

(Under the care of Dr. H. R. ANDREWS.)

A WOMAN, aged 33 years, was seen in consultation on March 7th, 1906. She had had pelvic discomfort and increasing difficulty in passing urine for several days, culminating in complete retention on March 5th, when two and a half pints of urine were drawn off by catheter. After the bladder had been emptied she had had frequency of

micturition but no difficulty. The patient was a tall, well-built, healthy woman, who had been married five months. Menstruation had been regular all through 1905, but the last two periods had been missed, the last menstruation occurring in the first week of January, 1906. Abdominal examination revealed a softish swelling, slightly moveable from side to side, in the hypogastrium, rising up out of the pelvis to a point halfway between the pubes and umbilicus. The breasts showed signs of activity. On vaginal examination the cervix, which was distinctly softened, was felt high up in front. The hollow of the sacrum was occupied by a hard round swelling which practically filled the pelvis. The diagnosis made was that of early pregnancy, of about two months' duration, the body of the uterus being perched on a fibroid which was probably cervical. As retention had occurred so early, although the pregnant uterus was above the pelvic brim, it seemed that frequent catheterisation would probably be necessary as pregnancy advanced, but, reasoning from cases of persistent retroversion of the pregnant uterus, it was thought possible that the bladder and urethra might gradually accommodate themselves to the presence of the tumour. If the tumour were removed immediately the uterus would almost certainly have to be removed as well, and in the unlikely event of the tumour being removed without the uterus abortion would very probably occur. If, on the other hand, the pregnancy could go to term, with the help of catheterisation, Cæsarean section would be necessary, followed by hysterectomy or myomectomy. The patient was told that the best thing to do was to wait until full term, if possible, with the hope of obtaining a living child by Cæsarean section rather than to operate at once and either do away with all chance of her becoming a mother or bring the present pregnancy to an untimely end. She was rather anxious to have the tumour removed at once, even though the operation might involve removal of the uterus, but eventually agreed to wait for a time to see whether she had much discomfort from pressure and from catheterisation. Retention of urine occurred again on March 13th and 18th.

On March 22nd she was admitted into the London Hospital where Dr. Lewers saw her with Dr. Andrews. He said that although the fibroid was probably cervical it might prove to be moveable under an anæsthetic. The patient was anæsthetised accordingly and it was found that the tumour could be pushed up easily for a short distance, so that although it still filled the brim it did not occupy much of the cavity of the pelvis. A large ring pessary was inserted to keep the tumour as high up as possible. The patient returned home a few days later. The tumour soon settled down into the pelvis again but possibly not quite so deeply as before. During April and May there was occasional retention of urine, relieved by passage of a catheter. The patient found that micturition was easier if she assumed the knee-chest position before attempting to pass urine. She took urotropin occasionally during April and May, for a few days at a time, to diminish the risk of cystitis. After the end of May she had no trouble with her urine and no discomfort of any sort that could be attributed to the presence of the fibroid although it remained apparently filling the pelvis. The ring pessary was removed some time after the end of May.

The patient was readmitted into the London Hospital on Oct. 10th, in excellent health and free from any unusual symptoms. The greatest circumference of the abdomen was 41 inches. The child, a good-sized one, was lying in the second position of the breech, but the breech was high up above the brim which was not occupied by any fœtal part. In the brim a firm mass could be felt indistinctly. The cervix was out of reach, a large, hard, rounded mass filling up the pelvis as before. No attempt was made to push the tumour out of the pelvis, as it was evident that even if it could be pushed up above the brim it would still obstruct delivery. Dr. Lewers saw the patient again and agreed that Cæsarean section was necessary.

On Oct. 11th, about four days before the expected date of labour, Dr. Andrews operated, performing Cæsarean section. After extraction of the fœtus, placenta, and membranes the tumour was pulled out of the pelvic cavity, coming out with a loud "sucking" noise. It was found to be a sessile subperitoneal fibroid of about the size of a cocoa-nut, growing from the left posterior quarter of the uterus just above the cervix. Its base of attachment was about four inches in diameter. No other fibroid could be seen, so Dr. Andrews decided to remove the tumour and leave the uterus. An incision was made round the base, and the tumour was enucleated with ease by blunt dissection with the finger-tips. Dr. Andrews thought that there was no communication between the interior of the uterus and the myomectomy wound, but his assistant said afterwards that he was quite certain that Dr. Andrews had opened the uterine cavity. However, this point was of no importance, as is shown by the after-history of most cases of Cæsarean section. There was free bleeding from the myomectomy wound, easily checked by a few buried catgut sutures. After sewing up the Cæsarean section wound with two layers of interrupted sutures of chromicised catgut the myomectomy wound was closed in the same way. The wounds were now of about equal length. The abdominal wound was then closed by through and through silkworm gut and buried catgut sutures. By the time that the abdomen was closed blood was issuing from the vagina, as had been seen in every case in which Dr. Andrews performed Cæsarean section before the onset of labour, the cervix being dilated by the contractions of the body of the uterus. This showed that mechanical dilatation of the cervix is quite unnecessary before the performance of Cæsarean section. The child, a boy, weighing 8½ pounds, was rather under the influence of chloroform at first, but cried lustily after a few hours. The mother made an uninterrupted recovery and was able to suckle the child from the first. Mother and child left the hospital on Nov. 8th, both very well, the child weighing 10½ pounds. On section the

fibroid was seen to be in a condition of necrobiosis, being red, rather homogeneous in consistence, and soft, and smelling of methylamin. Microscopical sections stained very badly.

Remarks by Dr. ANDREWS.—I think that this case is of interest as showing the gradual toleration by the bladder and urethra of pressure which caused retention of urine at first. There was probably more tension from upward stretching of the urethra than actual mechanical pressure. Obstruction to labour caused by a fibroid in the lower uterine segment usually necessitates hysterectomy; it is rarely possible to treat such a case by myomectomy, leaving a uterus which is still functionally perfect. The case was described and the tumour shown at the meeting of the Obstetrical Society of London on Nov. 7th. In the discussion that followed it was suggested that myomectomy

might have been performed when I first saw the patient, thus obviating Cæsarean section, and also that myomectomy might have been performed at full term or even during labour, allowing labour to take place naturally afterwards. Although myomectomy during pregnancy has been performed with success in several cases I do not think that it would have been good treatment in this case. The size and the low situation of the tumour would probably have rendered it impossible to remove the fibroid without removing the uterus itself. The tumour must have been twice as big as the uterus at the time that retention of urine first occurred and if it had been possible to remove the fibroid alone abortion would probably have followed. The tumour was larger and the period of pregnancy earlier than in most of the cases in which myomectomy has been performed without disturbance to the pregnancy. To have performed myomectomy at full term or during labour would have been impossible without making an abdominal incision from the pubes to the ensiform cartilage, as it would have been necessary to turn the uterus completely out of the abdomen before the fibroid could have been removed. Again, I should have been very unwilling to make a large wound in the lower uterine segment at the beginning of labour. The illustration, which was kindly drawn for me by Mr. P. H. Bahr, who watched the operation, gives a very fair indication of the anatomical relations, except that the tumour extended more deeply into the pelvis than is shown in the drawing.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Arterio-venous Aneurysm of the Neck.—Encapsulated Sarcoma in the Pterygoid Region.

A MEETING of this society was held on Nov. 26th, Mr. C. A. BALLANCE, the President, being in the chair.

Mr. JAMES BERRY made a communication on a case of Arterio-venous Aneurysm (aneurysmal varix) of the Neck, treated by operation, which had occurred in a female patient, aged 39 years. The case was chiefly remarkable on account of its rarity. The prominence, situated on the right side of the neck, was irregular and slightly larger than a man's fist. There were a well-marked thrill on palpation and a loud harsh bruit. The diagnosis presented no difficulty but the exact point of communication between arteries and veins could not be made out. At the operation, which lasted two and a half hours, the parts were freely exposed. The tumour, which was exhibited, consisted of tortuous and distended veins. With regard to the common cirsoid aneurysms of the scalp, so often traumatic in origin, Mr. Berry raised the question whether these tumours consisted of dilated and tortuous arteries, as commonly taught, or of dilated veins, and he inclined to the latter view.—The PRESIDENT said that he had assisted some years ago at an operation on a case of cirsoid aneurysm of the scalp in which the dilated vessels appeared to be arterial and communicated with the enlarged carotid arteries. He had also seen a cirsoid aneurysm on the dorsum of the foot and in that case also the dilated vessels were arterial. In some cases, however, the dilated vessels might be venous. He did not think there was any rule. He congratulated Mr. Berry on the success of his difficult operation.—Mr. CUTHBERT S. WALLACE had found in South Africa that injuries of the neck were fruitful sources of arterio venous communications and aneurysmal conditions. Proximal ligature was a safer method of treatment than excision but was not always available.—Mr. W. G. SPENCER remarked that in most instances cirsoid aneurysms of the scalp appeared to be arterial; a pulse could be felt and if punctured the blood came out in spurts. He also referred to cases which he had met with where the tumour affected the arm and the leg.

Mr SPENCER read a paper on a case of Encapsulated Sarcoma in the Pterygoid Region. The patient was a man, aged 30 years, who had suffered from recurrent attacks of rheumatic fever complicated by endocarditis and who had become weak and exhausted from the difficulty in swallowing, breathing, and sleeping consequent upon the bulging of the tumour inwards, so as almo t to fill the fauces. The tumour also protruded behind and below the ramus of the lower jaw. The encapsuled nature of the tumour was indicated externally by the mobility of the superficial structures and the absence of glandular enlargement, and internally by the mucous membrane of the pharynx and the soft palate gliding over the tumour without any sign of ulceration or of induration. The tumour was shelled out through a horizontal incision below the jaw without perforating the pharynx and without hæmorrhage. The tumour proved to be a fibro-sarcoma of the size of the fist, and six months after the operation there was nothing abnormal to be noticed except a linear scar. A similar case was described by Dr. (now Sir) Patrick Heron Watson in 1869[1] in which, after a large incision through the jaw into the mouth, the tumour was found and easily shelled out. Sir Felix Semon removed such a tumour from the lateral wall of the pharynx above the larynx for which a lady had worn a tracheotomy tube for two years.—The PRESIDENT recalled a case of fibro-sarcoma of the size of a Tangerine orange in the parotid region. The facial nerve was dissected out and the patient made a very good recovery.—Mr. BERRY referred to the case of a woman, aged 35 years, who presented a tumour which occupied the whole of the pharyngeal region. It was a fungating tumour, evidently of a malignant nature. It was, however, easily shelled out of a capsule and microscopically it was described as an endothelioma.

CLINICAL SOCIETY OF LONDON.

Amalgamation of Medical Societies.—Hæmorrhage into the Prefrontal Lobes.—Acute Peritonitis with Fat Necrosis.—Cystic Dilatation of the Ureter within the Bladder.

A SPECIAL general meeting of this society was held on Nov. 23rd, Mr. H. H. CLUTTON, the President, being in the chair, when a motion in accordance with the recommendation of the council was adopted agreeing to the amalgamation of the Clinical Society with the other medical societies.

An ordinary meeting was then held and the following papers were read:—

Dr. J. WALTER CARR communicated a case of Hæmorrhage into the Prefrontal Lobes of the Brain. The patient, a man, aged 53 years, a painter, was admitted to the Royal Free Hospital in a semi comatose condition, with a history that he had suddenly become unconscious about seven hours before. He was said to have had albuminuria about five years previously and to have been getting thinner and to have suffered from anorexia and vomiting for some time before his final illness. On admission the temperature was 98·6° F., the pulse was 56, and the arterial tension was very high; the urine was almost solid with albumin and contained a considerable quantity of sugar, but did not give the reactions for diacetic acid and acetone. Otherwise the results of physical examination were quite negative and there was not the slightest indication of hemiplegia or of any unilateral symptoms whatever. The man gradually improved and after two or three days completely recovered consciousness. About the seventh day, however, he again became restless and drowsy, his temperature slowly rose, and he died comatose on the ninth day from the onset. After the first day or two the sugar completely disappeared from the urine and only an occasional trace of albumin was discovered. At the necropsy it was found that a small saccular aneurysm on the anterior communicating artery had ruptured into the left prefrontal lobe and that the hæmorrhage had subsequently extended (probably only shortly before death) into the right prefrontal lobe. The kidney showed an early stage of chronic interstitial nephritis. Dr. Carr commented on the difficulties of diagnosis in lesions of the prefrontal lobes. Many examples of these difficulties had been afforded in cases of tumour of this part of the brain but the recorded instances of hæmorrhage were few.—Dr. A. E. GARROD recalled the case of a man admitted into St. Bartholomew's Hospital with an apoplectiform seizure who recovered. After recovery from this attack the patient became quite rational and took part in the work of the ward. Subsequently he died from a second seizure and after death evidences of old hæmorrhages were found in the prefrontal lobes.

Dr. JOHN FAWCETT read a paper on a case of Acute Peritonitis with Fat Necrosis unattended by Disease of the Pancreas. The patient, a woman, aged 59 years, was admitted into Guy's Hospital on Oct. 15th, 1905, for severe

[1] THE LANCET, May 29th, 1869, p. 744.

abdominal pain and vomiting which had come on suddenly on the previous day. The abdomen was not distended or rigid but was extremely tender on palpation in the upper part. The temperature remained subnormal throughout and the pulse did not rise above 92 per minute. Laparotomy was performed on Oct. 16th but no pathological changes were found except areas of fat necrosis in the great omentum and a small amount of extravasated blood. The patient died on the following day. At the necropsy a recent general acute peritonitis was revealed. There were some old adhesions between the stomach, the duodenum, the great omentum, and the pancreas. A widely spread fat necrosis existed and there was a recent hæmorrhage, of the size of a walnut, in the lesser omentum. The pancreas was firm and no abnormal changes could be discovered in it. The gall-bladder and bile-ducts were healthy; the gall-bladder contained three calculi, the largest being of the size of a hazel nut. All the other organs were healthy. Cultivations made from the spleen and from the blood in the right side of the heart gave a pure growth of the bacillus coli communis. Microscopically, the pancreas appeared to be quite healthy. Dr. Fawcett remarked that although most cases of fat necrosis were associated with disease of the pancreas yet there were a number on record in which no lesion of the pancreas had been found; and he referred to three such cases taken from Guy's Hospital post-mortem records of the past six years. In none of these, however, was a microscopical examination made. The statement made by most observers that fat necrosis was always a consequence of pancreatic disease rendered such a case as the one recorded exceedingly difficult to explain. It would, Dr. Fawcett thought, be wise to keep an open mind as to the possible production elsewhere of a fat-splitting ferment, perhaps as the result of bacterial action. On the other hand, a more complete knowledge of the conditions under which the pancreatic fat ferment might be set free might lead to the conclusion that the pancreas was the source of the ferment, even though there might be no disease of the gland. Possibly an obstruction to the duct or an interference with the blood-supply in some cases might result in a liberation of the fat ferment. Clinically, all the symptoms of acute perforation might be produced by fat necrosis.—The PRESIDENT commented on the complexity of the subject. In some cases very slight injury to the pancreas produced fat necrosis, yet in other cases of more serious damage to that organ this complication did not occur.—Dr. W. HALE WHITE drew attention to the difficulty of diagnosis of fat necrosis, but its detection was important so that operation might be avoided. The severity and the suddenness of the onset of pain were characteristic, and in the present case, which had been under his care in Guy's Hospital, the pulse had remained very slow.—Dr. W. CECIL BOSANQUET suggested that hæmorrhage coming from a small artery in the neighbourhood of the pancreas might give rise to fat necrosis. The absence of histological changes did not necessarily imply that there was no disorder of the pancreatic secretion.—Mr. W. F. FEDDEN referred to a case which presented all the symptoms of perforated ulcer of the stomach due to fat necrosis. The pancreas and other organs were normal but there were old adhesions around the pancreas.—Dr. H. S. FRENCH referred to Professor W. Stirling's researches, which had shown that the pancreatic juice could only act in the presence of the succus entericus; perhaps a reflux of the latter into the pancreatic duct was a causal factor.—Mr. W. G. SPENCER suggested that there might be superadded nodules of pancreatic structure which could easily be overlooked.—Dr. FAWCETT, in reply, said that obstruction to the pancreatic duct was known to produce fat necrosis.

Mr. SPENCER described a case of Cystic Dilatation of the Lower End of the Ureter containing Calculi which became Engaged Intermittently in the Urethra. A young man had for six years suffered intermittently from difficult micturition and nocturnal incontinence. Generally he presented no symptoms whatever and the usual evidences of renal and bladder calculus were absent. His symptoms had apparently been regarded as functional until Dr. R. T. Davison of Malden sent him into the Westminster Hospital under Mr. Spencer. Nothing abnormal was discovered until the patient was examined bimanually under an anæsthetic when a hard mass was found slipping about within the bladder. On the patient straining this became engaged in the urethra like an impacted calculus. By perineal section a cyst containing three calculi was found tightly grasped in the sphincter. The pedicle of the cyst was traced up to a portion of the orifice of the left ureter and here it was severed by the cautery. The man had now no urinary trouble. The specimen preserved in the Museum of the Royal College of Surgeons of England was exhibited. Mr. Spencer gave several references to previously reported cases.—The PRESIDENT referred to a similar case due to calculus in the right ureter in a male patient, aged 20 years, who was afflicted with sudden stoppages of urine accompanied by pain in the right side. Bimanually a stone could be felt. Skiagrams were exhibited which confirmed this. Suprapubic cystotomy was performed and a prolapsing ureter blocking the urethra like a ball-valve was discovered. Complete anuria occurred in such cases when both ureters were affected.—Mr. G. H. MAKINS also referred to a somewhat similar case and asked whether there was not some risk in snaring such polypoid growths. Was it not preferable to open the polypoid growth and to enucleate the stone?—Mr. SPENCER, in reply, doubted if these growths were due to true prolapse of the ureter; in some cases it seemed that the stone slipped down into the wall and in that way produced a bulging of the bladder wall; in the present instance Mr. S. G. Shattock, who had examined the growth, could find no evidences of ureteral structure.

LIVERPOOL MEDICAL INSTITUTION.

No-loop Gastro-enterostomy.—The Spontaneous Fracture of Urinary Calculi.—Patient with "Erb's Paralysis" of Traumatic Origin.—The General Management of Cases of Abdominal Section.

A MEETING of this society was held on Nov. 22nd, Mr. FRANK T. PAUL, the President, being in the chair.

Mr. K. W. MONSARRAT read a paper on Posterior Gastro-enterostomy, with special reference to its performance without a loop. He discussed the functional results obtained by this method, particularly in regard to the absence of regurgitant vomiting, and illustrated his paper by clinical cases.—The PRESIDENT stated that he had had the opportunity of seeing the condition present in three cases of gastro-enterostomy suffering from regurgitant vomiting and failed to find an anatomical explanation of the trouble. In these and other cases he had met with there was only one common element, and that was gastric atony. The patients were either neurotics or exhausted cancer cases and the most perfect "no-loop" operation was no bar to this cause of failure in such people. In past times and recently on special occasions he had performed the anterior operation, altogether perhaps 20 times, and it was noteworthy that he had not met with regurgitant vomiting following the operation. When the trouble occurred it could be cured by entero-enterostomy, especially with partial occlusion of the ascending limb of bowel between the intestinal anastomosis and the stomach. Such an operation, however, was difficult to accomplish after a genuinely "no-loop" operation.—Mr. W. THELWALL THOMAS said he had always performed posterior gastro-enterostomy by the "no-loop" method and considered the anterior operation and the Y method open to grave objections. In only one case had he observed any symptoms suggestive of the "vicious circle" and it was with difficulty that he had then performed entero-enterostomy.—Mr. R. W. MURRAY and Dr. E. T. DAVIES also spoke.

Dr. T. R. BRADSHAW related a case of Spontaneous Fragmentation and Evacuation of Uric Acid Calculi in a man, aged 80 years. Fragments had been passed at intervals extending over nearly a year. Calculi had been located previously in one kidney by the x rays and there had been attacks of renal colic and hæmaturia. He believed, with Prout, that uric acid calculi frequently had a radial structure which facilitated fragmentation and that the latter was brought about by the action of healthy urine containing a minimal quantity of nitrogenous waste products. He thought that urine of this character was not common in the subjects of calculi; hence the infrequency of spontaneous disintegration. He considered that the attempt to dissolve calculi by administering alkalies was useless and might be injurious by tending to the deposition of phosphates on a uric acid stone.

Mr. GEORGE G. HAMILTON showed a patient with Erb's Paralysis caused by a fall by which the brachial plexus was in part ruptured. Mr. Hamilton remarked that only three cases had been previously reported.

Dr. W. BLAIR BELL read a paper on the General Management of Cases of Abdominal Section. He first discussed the personal equation of the patient, which, he said, must enter largely into all considerations of treatment and prognosis. The preparation of the patient, with a detailed consideration of the value of atropine before the administration of the anæsthetic; the anæsthetic, and the reasons for preferring ether to chloroform, together with points in connexion with the technique of general operative procedures, especially in septic cases, were fully dealt with as essentials to be observed in the prophylaxis of post-operative complications and discomforts. He then described the routine post-operative treatment of a straightforward case, pointing out the value of frequent changes of posture, of early feeding with glucose solution and egg albumen in water, and the free use of salines by the rectum to prevent shock and thrombosis. He also discussed the treatment of the chief post-operative complications, indicating that most of them could be prevented by the methods of prophylaxis to which he had alluded.—Dr. H. BRIGGS said it was needless repetition, in any discussion on abdominal surgery, to mention the precautions and preparations which were as applicable to it as to general surgery. The results of the former illustrated the accommodating vitality and resourcefulness of the healthy peritoneum of which the general pathologist in more recent years had so frequently reminded the surgeon. The Trendelenburg position was now almost universally appreciated. On the etiology and treatment of post-operative, gaseous, intestinal distension there was now as much obscurity as ever, hence they were unprepared to receive the often confused and worthless reports of therapeutical and surgical resources.—Sir JAMES BARR said that he had many years ago recommended the systematic use of atropine before the administration of chloroform. He thought that strychnine was very much abused in the present day but that morphine in small doses was very valuable in all abdominal affections and did not check peristaltic action in the same degree as was generally supposed. He was pleased to find that Dr. Blair Bell took systematic records of blood pressure, as the impression even of the educated finger was frequently very deceptive, especially when the pulse was of small volume. In cases of collapse and shock the life of the patient often depended on the maintenance of the blood pressure and about the best drug they possessed for that purpose was adrenalin; unfortunately the action of the drug was completely evanescent and it was very difficult to get its physiological effect except when it was injected into the veins, or in abdominal operations by injecting it and normal saline solution into the peritoneal cavity. In cases of sepsis the blood pressure fell to a very low point owing to paresis of the splanchnic vessels; in such cases the injection of saline solution into the veins was only a temporary advantage as the fluid was at once effused into the tissues, while fluid injected into the subcutaneous tissues was frequently not absorbed; adrenalin then served a very valuable end.—Mr. THELWALL THOMAS was a warm advocate of the administration of atropine before ether. He criticised adversely the Clover type of inhaler which compelled the patient to breathe his own putrid exhalations as well as ether. In recording recoveries from operations following septic peritonitis it had become too much the habit to consider them due to some detail of procedure, such as dry swabbing or flushing, and to forget the two important factors, the resistance of the patient and the virulence of the infection. In the after-treatment of cases of abdominal section there was no special rule, but each case had to be taken on its merits and he did not absolutely forbid morphine in some cases. Alcohol had, as a previous speaker had mentioned, beneficial uses in after-treatment.—Mr. G. P. NEWBOLT, speaking of general peritonitis, advocated rapid operating and washing out, as by this method time was saved and less damage was done than when extensive dry swabbing was attempted. In some cases he regarded morphine and alcohol as of the greatest value. His experience in draining gut for distension had not been favourable and in some cases of marked distension the patients had recovered without the adoption of this procedure.—Dr. T. B. GRIMSDALE had come to the conclusion that an individual had only to travel far enough in order to have dispelled and refuted all those little fads that were considered of such importance. As long as the true general principles were adhered to the small details could be varied *ad infinitum*—if an operation was well performed it seemed as if they could do almost anything they liked in the after-treatment. He thought the thing to aim at was simplicity.—Mr. W. FINGLAND referred to the administration of atropine before ether as a most valuable procedure which he had adopted as a routine practice for many years. It had the effect of abolishing salivation, diminishing after-sickness, and facilitating the administration of the ether. In dental surgery it was equally valuable, as the operator had only the hæmorrhage from the extractions to deal with.—Mr. F. W. BAILEY thought that chloroform suited some cases better than ether. Ether should be given by the open method, preferably with an Allis inhaler, as this method avoided the difficulty of salivation and reduced the risk during the operation and of the danger of subsequent respiratory troubles. He generally began with chloroform in order to get complete relaxation of the muscles, which was so important in abdominal operations, and then went on with ether.—Mr. MURRAY, Mr. HAMILTON, and Dr. DAVIES also spoke.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

The So-called Functional Cardiac Murmurs.—Splenomegaly.

A MEETING of this section was held on Nov. 9th, Dr. J. M. REDMOND, the President, being in the chair.

Dr. R. TRAVERS SMITH read a paper on the So-called Functional Cardiac Murmurs, dealing especially with the pulmonary systolic functional murmur, or the common "hæmic" murmur. He reviewed the current theories to explain this murmur and showed how they could all be refuted on etiological, clinical, or post-mortem evidence. It was urged that this murmur was closely associated with anæmia; in fact it had been generally explained on an anæmic basis. He laid stress upon the facts that even apart from anæmia the murmur was common in neurotic individuals, in those who were "out of training," and in connexion with many fevers (especially during convalescence), in all of which conditions a "flabby" state of the body musculature and lowering of tone might be expected. In most of his cases he had established a history of some strain, often inconsiderable to any normal individual. Under these conditions the ventricles of the heart were liable to suffer, especially at the weakest point of their outer boundary wall—namely, the infundibulum, or conus arteriosus. The weak myocardium being strained resulted in incomplete systole or actual dilatation of the infundibulum, the blood being forced from the body of the right ventricle at the systole through the unobliterated cavity of the infundibulum into the pulmonary artery. This, Dr. Smith submitted, was the cause of the murmur. In proof of this view he urged the following points: (1) the murmur disappears with rest in bed, but recurs if the patient is allowed to get up too soon; (2) it is best heard at the junction of the infundibulum and the pulmonary artery; (3) it can be traced better downwards over the infundibulum which comes to the surface than upwards over the pulmonary artery which slopes posteriorly; (4) it is heard best in expiration, because the pressure in the pulmonary artery is thereby raised with further strain on the infundibulum, and it can sometimes be actually produced by a prolonged expiratory phase; (5) a slight, sudden exertion, such as sitting up, diminishes the murmur, as it affords a stimulus to the infundibulum to contract more energetically, and occasionally the murmur increases on sitting up, showing greater weakness of the infundibulum; (6) the murmur is commoner in youth owing to the relatively high pressure in the right ventricle as judged by the loud pulmonary second sound in youth; (7) it disappears with gross dilatation of the right ventricle when the dilatation of the infundibulum fuses with that of the body of the ventricle—in fact, it is not heard with a tricuspid regurgitant murmur; (8) when a functional pulmonary diastolic murmur occurs with a systolic one (a condition of which Dr. Smith had met with two examples) it is best explained upon the hypothesis that blood remaining in the infundibulum regurgitates thence into the body of the ventricle at its commencing diastole; and (9) almost invariably the area of superficial cardiac dulness is increased upwards in the presence of a pulmonary functional systolic murmur.—Dr. T. G. MOORHEAD said that he regretted that Dr. Smith had not given them his views on the other functional murmurs.—Dr. SMITH, in reply, said that it was

his intention to deal with the other murmurs in another paper.

Dr. A. R. PARSONS read a paper on Splenomegaly with Eosinophilia, illustrating it by a case which he showed. He described the condition of the blood and the patient's general symptoms and gave details of the history. He said that treatment by x rays had had no appreciable effect.

MIDLAND MEDICAL SOCIETY.—A clinical evening of this society was held on Nov. 14th, Dr. Arthur Foxwell, the President, being in the chair.—Mr. Alexander W. Nuthall showed a girl, aged four years, the subject of Dorso-Lumbar Spinal Caries, who, after standing or walking for a time, adopted a peculiar posture, the hands being placed on the thighs just above the knees, the hips bent, and the weight of the body thus partially taken off the affected vertebræ. Her symptoms began nine months ago with pain in the legs and screaming when lying down. For the last six months she had frequently called out "Oh my back." She has a great tendency to lie on her back. There has been an angular projection of the dorso-lumbar region for two months.—Mr. Charles A. Leedham-Green showed a case of Plastic Operation on the Arm.—Dr. John Douglas Stanley showed a case of Probable Mesencephalic Tumour.—Dr. William H. Wynn showed two cases of Lupus which were being treated with minute doses of tuberculin controlled by estimation of the opsonic index. The first patient, a woman, aged 55 years, had suffered from lupus of the right cheek for 18 years. It had been treated for prolonged periods by surgical methods but had never completely healed. When first seen by Dr. Wynn on July 25th the patch occupied nearly the whole of the right cheek. The opsonic index stood at 0·6. She was inoculated with $\frac{1}{1000}$th of a milligramme of tuberculin T.R. five times at varying intervals. The first inoculation raised the index considerably above normal, the highest point reached being 1·7. The only local treatment was by hot sand bags. Improvement was marked, and 16 weeks after the first inoculation the patch was almost completely healed. The second patient, a woman aged 58 years, had suffered from fungating lupus of the nose for 15 months. She was admitted to hospital on Sept. 11th and treated with the x rays for four weeks with only slight, if any, improvement. At the end of this period the opsonic index was 0·7. She was inoculated on three occasions with $\frac{1}{1000}$th of a milligramme of tuberculin T.R. and the x rays were again applied. The index rose after the first inoculation to twice its original height and remained high. Improvement was marked and rapid and after four weeks' treatment only a small rapidly healing ulcer could be seen. Dr. Wynn emphasised the importance of first raising the anti-bacterial power of the blood by properly spaced inoculations of tuberculin and then stimulating the part in order to bring an increased flow of richly charged lymph into intimate relation with the diseased tissue. Such local stimulation could be effected by the x rays, the Finsen light, hot fomentations, or hot sand bags. It was also useful to lower the viscosity of the blood by administering citric acid.—Mr. Leonard P. Gamgee showed the Brain of a man, aged 48 years. At the end of February, 1906, the patient, who had previously been in good health, noticed a transitory twitching of the muscles of the left thigh. Three days after this he had violent spasms of the muscles of the left thigh and rigidity of the abdominal muscles. On the next day some anæsthesia and loss of power in the left leg were noticed. The loss of power extended to the left arm and complaint was made of severe right-sided headache on March 15th. A trephine opening was made over the right motor areas and the brain was explored, but with a negative result. The patient died within 24 hours after the operation. At the necropsy an abscess of the size of a walnut was found in the right cerebral hemisphere close to the surface and just behind the callosomarginal fissure. The pus contained the staphylococcus albus. There was no disease of either ear or of the lungs.—Dr. Walter R. Jordan showed the Brain of a boy, aged six years, who was admitted to the Children's Hospital, Birmingham, with a history of having been unsteady on his feet for 12 months. There had been weakness and tremor of the right hand and arm for six months and headache had been complained of for some years. Tumour of the right cerebellar hemisphere was diagnosed and Mr. Gamgee proceeded to operate. On removal of bone, however, the hemisphere bulged into the opening, and with a trocar and cannula more than an ounce of pus was readily evacuated. The boy died on the second day after the operation. At the necropsy an abscess cavity was found on the under surface of the hemisphere posteriorly and reaching to the middle line.—Dr. R. B. D. Hird and Dr. A. Douglas Heath showed a case of Hysteria in a woman, aged 50 years, who had been under observation for three years. She had first attended the Birmingham Eye Hospital complaining of asthenopia. Amongst her symptoms were abrasions of the eyelids, impaired vision subject to considerable variation at times, hysterical aphonia on three occasions, and the development of a form of alopecia areata, which, however, was not typical. Her fields of vision had become more and more contracted until for over the past year they had consisted of a small area corresponding to the fixation point only. She had no difficulty in walking about and never walked against obstacles. Her legs had been paralysed on one occasion and her hands were sometimes paralysed temporarily.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held on Nov. 8th, Dr. Thomas Beattie, the President, being in the chair.—The first part of the meeting was occupied by an exhibition of a series of groups of clinical cases.—The second part of the meeting was devoted to a discussion on the Treatment of Fractures by Early Movement and Massage.—Mr. H. Brunton Angus, in opening the discussion, said that the pioneer of this form of treatment was Dr. Wharton P. Hood. Dr. Lucas Championnière of Paris published the first article on the subject in the medical journals in 1895 under the title of "Traitement des Fractures par le Massage et Mobilisation." Sir William Bennett, in opening the discussion on this subject at the meeting of the British Medical Association in 1900, also advocated this plan. In recent fractures the surgeon had to deal not only with the broken bones but in addition there were laceration of the soft parts and all the concomitants of traumatic inflammation. Further, the return of blood along the veins was deprived of an important adjuvant by the loss of active muscular contraction if the limb was subjected to absolute immobilisation. Prolonged inactivity of the limb was followed by muscular wasting and the formation of adhesions, which matted together all the parts around the fractured spot. The objects specially aimed at in this method of treating fractures were: (1) to prevent muscular wasting and debility by early voluntary exercise and (2) to prevent adhesions in and around the neighbouring joints by movement—preferably volitional. Various objections had been made to this form of treatment, some of them being as follows:—1. The danger of embolism had been spoken of, but this did not seem to have been observed more frequently than in fractures treated by prolonged fixation. 2. The displacement of the bones that would follow interference with their condition of rest was another argument against the method, but if skiagrams were taken of all cases in which fractures had been treated successfully it would be seen that much displacement was quite compatible with excellent restoration of function. It seemed that if a half or even a quarter of the diameter of the ends of the bones were in apposition firm and useful union resulted. 3. A fear had been expressed that non-union would frequently follow the disturbance of the fractured ends, but this did not occur in practice, as was well shown in fracture of the ribs and jaw. In three cases of delayed union recently under Mr. Angus's care in which wiring had failed, rapid union followed in all cases after the patient walked on the limb with some slight support to the seat of fracture. 4. The length of time required to carry out this plan successfully was a serious objection but the method was easily taught to an intelligent person who would act under the supervision of the medical man. The following system to be adopted in the treatment of fractures was recommended: 1. To reduce the deformity, under anæsthesia when necessary. 2. To apply retentive apparatus which left the seat of fracture accessible without disturbance of the fragments. 3. To commence friction over the seat of fracture at once, directing the motion towards the heart, gently and for 15 minutes. 4. On the second or third day to make the patient move his fingers or toes and to continue the friction daily, increasing its duration up to half an hour. 5. Within the first week to steady the fracture and to make the patient move his wrist or ankle. 6. By the end of the second week to steady the fracture and make the patient move his knee or elbow. 7. By the end of the third week to remove the splints and allow the patient to use the arm. If the fracture was in the lower limb more time should be given.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Nov. 16th, Dr. W. J. Tyson being in the chair.—Dr. James Burnet communicated a paper on Psoriasis in Childhood, proposing the theory that psoriasis in early life was a manifestation of rheumatism and to support his view he mentioned that both diseases were rare under the age of five years and that psoriasis in an infant was not so generalised or scaly as in the adult; he mentioned two cases in which the conditions were associated. As a result of this theory he treated psoriasis with as large doses of aspirin as could be tolerated.—Dr. E. J. Spriggs and Dr. F. W. Higgs showed an Epileptic Child, aged four years, with Hemiplegia, apparently due to fits. Athetosis was marked in the paralysed arm and slightly in the leg also. There was some mental impairment.—Dr. E. Cautley showed a male, aged four years, with Encephalitis. The illness began suddenly in August with fever and cerebral symptoms, followed by unconsciousness, rigidity of the neck muscles, conjugate deviation of the eyes to the left, and trismus. The temperature was 102·4° F. More fits followed, but on the eighth day he recovered consciousness; the mental condition had improved and the only feebleness left was in the muscles supplied by the right sixth and the left seventh nerves.—Dr. Spriggs also showed a girl, aged 12 years, with Congenital Division of the Clavicle into Two Parts. Each clavicle was in two parts, about one and a half inches long, connected by a freely moveable joint. The x rays showed deficient ossification and Dr. Spriggs suggested that the ossification of the membrane bone was absent, the bone present being the ossification of the cartilaginous extremities.—Dr. T. R. C. Whipham showed a case of Bronchiectasis in a Young Child, aged two years. It appeared to be due to bronchitis and pneumonia followed by whooping-cough.—Mr. Philip Turner showed a case of Lateral Congenital Fistulæ of the Neck in a girl, aged eight and a half years. The openings were one and a half inches above the clavicles on the anterior borders of the sterno-mastoid muscles.—Mr. Raymond Johnson showed a case of a Large Retro-peritoneal Dermoid Tumour in a child. It was in the upper left half of the abdomen and resembled a sarcoma of the kidney. The lumbar spine was curved to the right and in the left loin were two small fluctuating swellings apparently unconnected with the larger tumour. Removal of a portion of a small cyst showed the naked-eye and microscopic appearances of a dermoid.—Dr. F. J. Poynton showed a child with Trophœdema of the Left Lower Extremity and the Left Labium. The patient was a girl, aged seven years.—Dr. George Carpenter showed three cases of Infantile Paralysis: (1) in a boy, aged seven years, with double foot-drop with degenerative reactions in the muscles of the front of the legs; (2) in a girl, aged three years, with double paraplegia and weakness of the muscles of the neck; and (3) in a girl, aged 20 months, with flaccid paralysis of the right leg; the left leg was rigid with faint reaction to the faradic current. The onset was sudden after an attack of diarrhœa and vomiting.—Dr. Carpenter also showed a case of Syphilitic Nephritis in an infant, aged three months. The child was dropsical, the urine contained albumin and blood corpuscles, and hyaline, epithelial, and granular casts. The infant had well-marked snuffles and a fading syphilitic eruption. There was some improvement after treatment by mercury.—The cases were discussed by Dr. Spriggs, Mr. G. Pernet, Dr. Porter Parkinson, Dr. Carpenter, Mr. Raymond Johnson, Mr. F. Jaffrey, and Dr. Tyson.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 16th, Dr. J. Lindsay Steven, the President, being in the chair.—Dr. T. K. Monro and Dr. A. N. McGregor showed two patients on whom the operation of Gastrostomy had been performed for complete œsophageal obstruction due to malignant disease in one case and to traumatic stricture in the other. The subject of the malignant disease was a man, aged 70 years. The other patient was a woman, aged 21 years, who was first admitted to the Glasgow Royal Infirmary on June 15th after having drunk some solution of ammonia. In about a week's time she was able to swallow milk and to retain it. She was dismissed on July 3rd to all appearance well. Very soon, however, she became unable to swallow and was readmitted on July 23rd with complete obstruction of the gullet. The operations were practically identical. A straight vertical incision was made through the left rectus at the level of the eighth and ninth ribs. A cone of stomach was withdrawn; its base was sutured to the parietal peritoneum and the cut edges of the posterior wall of the sheath of the rectus. An opening was made into the stomach at the apex of the cone and a tube was inserted and fixed by catgut suture. The cone was gradually invaginated and a continuous catgut suture was inserted through the stomach and tube during this process. When the invagination reached the level of the posterior wall of the rectus the whole depth of the wound was sutured close up to the tube from both ends. The skin was sutured by Michel's clamps. The after-history was uneventful. In the first case the tube came out on the fourteenth day and on the tenth day in the cicatricial case.—Dr. G. H. Edington read notes on Two Cases of Intestinal Obstruction by a Band. In the first case a band stretched from an upper tuberculous mesenteric gland to the right iliac fossa and obstructed the ascending colon. The band was divided, the gland was excised, and the patient recovered. In the second case a band extended from a tuberculous gland in the lower mesentery to the ileo-colic region and constricted a loop of the lower part of the ileum. The patient died 31 hours after the operation.—Dr. R. M. Buchanan read a paper on the Carriage of Infection by Flies. Flies caught in a typhoid fever ward were placed in Petri capsules containing lactose neutral red crystal violet agar and allowed to walk about. Abundant coli-form organisms developed but no bacillus typhosus. Other flies were placed in capsules smeared with typhoid stools and transferred to the culture media; one or two colonies of bacillus typhosus developed among an exuberant flora. Flies were caught when walking over the carcasses of two pigs dead from swine fever. In one plate the bacillus was identified. Similar experiments on the carcasses of animals dead from anthrax yielded abundant growths of the bacillus anthracis. One cubic centimetre of bouillon, used to wash the surface of an agar plate contaminated by a fly, which had walked over a smear of tuberculous sputum, was injected intraperitoneally into a guinea-pig. Tuberculosis developed. These experiments proved that flies carried organisms on dirt adhering to their feet and emphasised the importance of protecting food from them.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held on Nov. 23rd, Dr. A. H. Bampton being in the chair.—Mr. W. Thompson showed a case of Extensive Rupture of the Posterior Surface of the Liver in a boy, aged six years, with recovery after packing and drainage through the loin.—Mr. H. Littlewood showed a case of Amputation of the Penis for an epitheliomatous ulcer of over 13 years' duration. The patient had been regularly catheterised since infancy. He also exhibited a series of cases of Renal Surgery.—Mr. R. L. Knaggs showed a boy, aged 14 years, after Fracture of the Lower Cervical Spine in May with Paresis of all Limbs. Recovery occurred with immobility of the cervical spine and some bony prominence.—Mr. J. F. Dobson showed a case of Paralytic Talipes Calcaneo-valgus treated by tendon-transplantation.—Mr. W. H. Brown showed a girl, aged 13 years, with Outward Dislocation of both Patellæ; symptoms on walking for three years.—Dr. T. Churton showed a case of Still's Disease (or ? congenital syphilitic arthritis) in a boy, aged ten years, who four years ago had an acute attack of "rheumatism," becoming chronic. He now had arthritis and periarthritis of many joints and enlarged glands. The spleen was not palpable, and there was evidence of congenital syphilis. Improvement followed under treatment by syrupus ferri iodidi. Dr. Churton also exhibited a case of Arthritis Purpura with abdominal symptoms showing marked improvement under chloride of calcium.—Dr. T. W. Griffith showed three cases of Friedreich's Ataxia (two in sisters). Attention was drawn to the peculiar tense hard feeling in the calf muscles, in one case resembling pseudo-hypertrophic paralysis; the same patient also arose from the supine position in the manner characteristic of this latter disease.—Dr. W. H. Maxwell Telling showed a case of Acromegaly in a woman, aged 23 years. The symptoms were of two years' duration, these being principally a feeling of "tiredness" and getting stouter. There were no cerebral or visual symptoms. Dr. Telling also showed a case of Unusual Form of Bromide Eruption—large, chronic, infiltrated, papillomatous patches on the limbs, in addition to the bromide acne—in a man, aged 22 years.—Dr. Telling and Dr. G. E. St. Clair Stockwell showed a case of Cerebral Diplegia in a man, aged 56 years. The onset was mainly hemiplegic at two and a half years, with mental dulness and athetotic and grimacing movements. Six years ago the opposite side became

more seriously affected as the result of a severe illness.—Dr. E. F. Trevelyan showed two cases of infants with Obstetrical Paralysis. In one case the paralysis affected both arms (except the hands). He also exhibited a case of Hemiatrophy of the Tongue, with facial asymmetry and fits in a girl, aged four years, and a case of Pseudo-hypertrophic Paralysis with no enlargement of muscles.—Mr. G. C. Hayes showed a case of Syphilitic Irido-cyclitis and Interstitial Keratitis in a child, aged nine years.—Mr. M. A. Teale showed an example of Absence of the Lens and Iris following a blow; the lens appeared to have been forced through the ruptured coats of the eye. Vision was fair with glasses.—Dr. A. L. Whitehead showed a case of Cerebellar Abscess following mastoid disease in which horizontal nystagmus on the side of the abscess was the only localising sign.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of the forty-fourth session of this society was held on Oct. 16th.—Dr. A. Mantle, the President, who was in the chair, delivered his inaugural address on Suggestions as to the Etiology of Tumour Formation, including Cancer, based upon clinical observation.—Dr. W. E. Heilborn showed the Heart and Lungs from a case of Congenital Morbus Cordis. The specimen showed atresia of the aorta, patent ductus arteriosus and foramen ovale, recent vegetations on the mitral and tricuspid valves, and numerous infarcts in the lungs.—Dr. C. F. M. Althorp showed a patient with extensive Nævus of the Chest and Arms.—The second meeting was held on Nov. 20th, the President being in the chair.—Dr. T. J. Wood showed the following specimens: (1) Large Stone removed from the Bladder of a patient who died ten days after operation from uræmia, and Kidneys of the same patient showing Multiple Cystic Formation and Cirrhosis; (2) Three Enlarged Prostates; (3) Cancer of the Rectum from a woman, aged 29 years; and (4) Extra-uterine Gestation.—Dr. B. H. Slater showed: (1) Double Ovarian Dermoid; (2) Ovarian Cyst and Abscess; (3) Carcinoma from a case of Pylorectomy; (4) Aneurysm of the Aorta; and (5) Dermoid of the Neck.—Dr. W. H. Horrocks read a paper on the Radical Cure of Inguinal Hernia in Elderly Bronchitic Men. After introducing his subject Dr. Horrocks went on to point out the difference between the abdomen in youth and in old age. In the former the upper part of the abdomen was prominent and the lower zone was retracted and firm; in the latter the conditions were exactly reversed. This was due to the fact that in old age the mesentery lengthens by stretching. After pointing out the difficulties of dealing with the sac in large herniæ and the troubles met with owing to the large rings, weak muscles, constant cough, and the senility of the tissues, Dr. Horrocks advised castration in dealing with these cases. The points in favour of the procedure were: (1) Rapidity of operation; no time need be wasted in dealing with the sac; and (2) complete closure of the abdominal canal.—In the discussion which followed, Dr. Wood said that he preferred in these cases to operate with local anæsthesia.—Dr. T. W. Hime also spoke, and Dr. Horrocks then replied.—Dr. Slater read notes on a case of Suprapubic Prostatectomy. The patient had had the usual symptoms of retention and dribbling. A soft No. 10 rubber catheter was easily passed. The residual urine amounted to 20 ounces. Per rectum the prostate was felt to be firm, not tender, and of about the normal size. Considering the case to be one of vesical atony a catheter was passed regularly every six hours for three weeks and strychnine and urotropine were administered internally. Eventually it was decided to explore with a view to finding some localised outgrowth from the prostate causing the obstruction. The prostate was removed and found to be practically normal (? slightly enlarged). The patient made a good recovery and was completely cured, passing his urine normally and there being no residual urine.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A meeting of this association was held on Nov. 15th at Chandos-street, Cavendish-square, London, W., under the presidency of Dr. Robert Jones.—The President made feeling reference to the death of Dr. Oscar T. Woods of Cork, a past president of the association, and to the death of Dr. F. H. Craddock and Dr. R. S. Stewart.—Mr. H. F. Hayes Newington drew attention to the forthcoming changes in the registers, statutory under the Lunacy Act, and to the facility with which the recently authorised tables of the association could be compiled from them.—Dr. R. Percy Smith gave an interesting description of the International Congress on the Care of the Insane held in Milan last September.—Dr. T. Outterson Wood, on behalf of the members of the association, presented the President with an illuminated address expressing their high appreciation of the valuable services rendered to the association by Dr. Jones during the nine years in which he was honorary general secretary.—Dr. R. Welsh Branthwaite read a paper entitled "Drunk and Disorderly." He drew special attention, on the physical side, to the infrequency with which venereal disease and affections of either the liver or the kidneys were met—this in contradistinction to what might have been expected—and on the mental side to the very large proportion of cases which showed evidence of either certifiable insanity or mental deficiency and degeneracy. The paper induced a lively discussion.—In commenting on it the President laid stress on the importance of cultivating in early years the moral sense and considered that the cases depicted were closely allied to the insane.—Dr. G. H. Savage considered the report a definite confirmation of the recent conclusions of Mr. W. Bevan Lewis.—Dr. Wood expressed regret that when a person was seen to be drinking himself into mental infirmity or death the law did not permit the exercise of legal restraint.—Dr. C. A. Mercier thought that many of the photographs handed round as illustrative of the cases exhibited the facies of congenital syphilis.—Dr. J. Scott, Dr. W. C. Sullivan, Dr. T. Seymour Tuke, Dr. G. M. Robertson, Dr. W. Crochley Clapham, and Dr. T. A. Williams (of Washington, U.S.A.) also spoke.—Dr. Purves Stewart contributed some very interesting and practical notes, illustrated by microscopic and lantern slides, upon the Diagnostic Value of Examination of the Cerebro-spinal Fluid. He claimed that in all stages of general paralysis of the insane, including periods of remission of symptoms, it was possible to pronounce a definite diagnosis of the disease from a microscopic examination of centrifuged cerebro-spinal fluid.—The paper was discussed by the President and Dr. R. H. Cole, Dr. Mercier, and Dr. D. G. Thomson.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Nov. 2nd, Dr. J. B. Ball, the President, being in the chair.—The President showed a case of Tumour of the Pharynx of about the size of a Tangerine orange, pushing forwards the soft palate. The tumour was of solid consistence; on the external surface, just behind the ramus of the lower jaw, there was a distinct hard swelling, apparently continuous with the tumour inside. The patient had no pain and only a little difficulty in swallowing food and occasionally slight difficulty with her breathing.—Mr. H. T. Butlin considered the case was operable and advised that the tumour should be removed.—The President also showed a man, aged 52 years, with a Swelling over the Left Arytenoid Region, extending upwards along the ary-epiglottic fold; the lateral folds of the pharynx were also thickened.—Dr. Jobson Horne cited a case which presented similar clinical appearances in the larynx, the patient succumbing to chronic interstitial nephritis; at the post-mortem examination there was found below the swelling of the arytenoid, and situated in the fold between the cartilages of Santorini and Wrisberg, a minute ulcer leading down to commencing necrosis of the underlying cartilage.—Dr. StClair Thomson showed two cases of Extensive Tuberculous Laryngitis which had completely healed and had remained healed for some time without any local treatment. It was, moreover, noteworthy that neither of the cases had undergone treatment in a sanatorium.—In the discussion which followed there was a general consensus of opinion and several cases were cited that good and similar results were obtained by rest without any local interference with the larynx.—Dr. H. J. Davis showed a case of Stenosis of the Glottis with Dyspnœa and Stridor, with a history of four previous attacks of pleurisy and of physical signs in the left lung. The evidence was considered to be in favour of tuberculosis.—Dr. P. Watson Williams showed a case of Epithelioma of the Larynx, Dr. StClair Thomson also one of Malignant Disease of the Larynx, and Dr. J. Dundas Grant a Glosso-Epiglottidean Growth believed to be Sarcoma. These three cases were discussed together; the disease was in all three cases at the base of the tongue and upper part of the larynx; in two of them the glands were involved but probably within the reach of an extensive operation.—Mr. Butlin was of opinion that an operation should be performed in all three cases. It should comprise removal of the contents of the anterior triangle on the affected side with ligature and removal of the external carotid artery and all its branches. It would be well to remove at the same time the external carotid artery and its branches on the other side of the neck

A few days later the removal of the primary disease could be performed with scarcely any hæmorrhage and as freely as might be desired.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting of this society held on Nov. 20th Dr. John F. Le Page, the President, delivered an address, in the course of which he made a reference to Post-Partum Hæmorrhage and strongly denounced the teaching of the medical schools and of the text-books as antiquated, unscientific, and delusive. His experience, he said, included about 5000 parturitions, in some of which death from post-partum hæmorrhage appeared actually to have taken place, but he had never seen a death. These cases were essentially of a nature which demanded instant action and there was absolutely no time for deliberation. He said that the whole teaching of the schools was to try various measures, such as kneading, cold water, hot water, ice put into the uterus, hot water injected into the uterus, iced water injected into the rectum, thrombosis by iron perchloride, and so on. If, before there was any hæmorrhage, the uterus did not contract, why should the obstetrician when the system was drained of vital fluid and the whole nervous system was paralysed, hope for such a miracle as that the impotent uterus would in response to equally impotent castigations contract and retract itself into a firm and vital organ? Dr. Le Page's recommendations for the treatment of post-partum hæmorrhage were as follows. 1. In all cases of post-partum hæmorrhage the abdominal aorta must be instantly compressed against the spinal column, by which means the current through the uterine arteries was at once shut off. A very important fact was that, although no blood was allowed to pass the compressing hand, there was still a sufficient, although very limited, supply through the ovarian arteries to maintain uterine vitality. Compression should be made by the ulnar portion of the left hand clenched, than which nothing could be more convenient and effective. At short intervals the pressure should be made to slide from one part to another of the available three or four inches of aorta so that no injury might be done to the sympathetic system of nerves, which formed a network around the vessel. The pressure should be continued until uterine contraction was secured, and the greatest care in its release, which should be gradual, was essential. 2. The pelvis must be elevated by means of a firm support under the loins. 3. The legs and arms must be raised to the perpendicular and bandaged. The effect of that manœuvre was that in many cases almost a normal tension of the whole blood was attained in one or two minutes. 4. The right hand, previously sterilised, must be then passed into the uterus to detect any laceration or to remove any remaining portion of placenta and to afford a *point d'appui* for grasping and compressing the uterus from without. The bandages must be loosened very gradually and in proportion to the amount of liquid nutriment taken and the effect.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on Nov. 20th, Mr. J. Troutbeck being in the chair.—After several exhibits of medico-legal interest had been shown, Dr. W. Wynn Westcott proceeded to narrate "Twelve Years' Experiences of a London Coroner" in a district the population of which exceeded half a million persons. His experience of medical witnesses was that a police surgeon of several years' standing was the best person to afford evidence in most criminal injuries; in cases of poisoning an analytical chemist was more useful than an expert pathologist. He had granted post-mortem examinations in nearly 70 per cent. of his inquests. Several causes had led to a decline in the number of inquests which he had held during recent years; in all he had held 13,176 inquiries. The annual deaths from destitution varied from 12 to 18. Illegitimate children were curiously small in number when compared with better-class districts. The Infant Life Protection Act, 1897, the Midwives Act of 1902, and the Prevention of Cruelty to Children Act, 1904, were all forces for good. Simple natural deaths of adults were nearly all due to cerebral hæmorrhage and syncope consequent on valvular or muscular heart disease. 68 per cent. of deaths from the rupture of aortic aneurysms were in males. Hæmatemesis caused one death annually and hæmoptysis a score, 75 per cent. of the latter being in males. Deaths of old people after fracture of the neck of the femur were common, 70 per cent. of the victims being women who were usually over 80 years of age; the men were generally over 60 years. Every tenth case inquired into was a death of an infant while in bed: 709 were boys and 641 were girls. Of these 531 boys and 498 girls perished before they were three months old and 393 boys and 376 girls before they were two months old; 95 per cent. of the cases occurred in children under six months old; the winter months showed the most numerous fatalities. He had had on an average one suicide a week: 465 males and 160 females; no month was without a case. May and July were popular; February and December were unpopular in this connexion. Dr. Wynn Westcott regretted that no means existed at present whereby the pathological discoveries made by post-mortem examiners could be recorded and preserved.—In the discussion which ensued the following took part: Mr. Troutbeck, Dr. R. Salusbury Trevor, Mr. Digby Cotes-Preedy, Dr. Alexander Ambrose, Dr. Stanley B. Atkinson, and Mr. R. Henslowe Wellington.

Reviews and Notices of Books.

The Cambridge Natural History. Edited by S. F. HARMER, Sc.D., F.R.S., Fellow of King's College, Cambridge; and A. E. SHIPLEY, M.A., F.R.S., Fellow of Christ's College, Cambridge. Vol. I. London: Macmillan and Co., Limited. 1906. Pp. xviii.–671. Price 17*s.* net.

THERE is a great advantage in apportioning a definite branch of such a wide subject as Natural History to particular workers, for the number of monographs is so large that no man can now make the proud boast of Dr. Sharpey—that he thought he did not overlook in any year a single important paper on anatomy or physiology in English or foreign periodicals. The subjects treated of in this volume are so extensive and the literature bearing upon them is so vast that the editors have exercised a wise discretion in giving each to the pen of an expert to whom the knowledge appertaining to it is familiar and who is capable from his own experience of writing magisterially and taking up a definite position on disputed questions. The Protozoa have in accordance with this view been placed in the hands of Marcus Hartog, the Professor of Natural History in Queen's College, Cork; the Porifera, or sponges, in those of Igerna B. J. Sollas, lecturer on Zoology at Newnham College, Cambridge; the Cœlenterata and Ctenophora in those of S. J. Hickson, Beyer Professor of Zoology in the Victoria University of Manchester; and the Echinodermata in those of E. W. MacBride, Professor of Zoology in McGill University, Montreal—a distribution of work that will commend itself to all who take an interest in biology.

As an introduction to the volume a kind of table of contents is given presenting a scheme of the classification adopted, which covers no less than nine closely printed pages with the names of the orders, sub-orders, families, and groups that are more or less fully described in the body of the work. There are few readers, we venture to say, who will not be astonished at the almost infinite number of forms that appear as representatives of each class, and when we reflect that an equal or still greater number have existed in the ages that are passed and have left no trace we can scarcely avoid the reflection that man himself is but one of these essays of nature and may give place to some higher and more perfect form.

The chapters on Sporoza or Protozoa parasitic in Metazoa and on the Flagellata are those to which the medical reader will turn with most interest, since they include many organisms that are parasitic in man and animals and are the cause of various malarial diseases and murrains. The form of the sporozoa here taken as a type is the monocystis, one of the gregarinidæ, known as the Lankesteria ascidiæ, after the naturalist who has paid so much attention for many years past to these forms of animal life. The Lankesteria inhabits the seminal vesicles of the earthworm. It is composed of an endosarc with a large central

nucleus. Through the endosarc are seen numerous refractive granules of paramylum, some proteid granules, and oil-drops. Inclosing the endosarc is the ectosarc, composed of three layers—a porous, a clear plasmatic, and a muscular layer. In the process of multiplication two individuals become encysted and approximate but do not coalesce. The nuclei become reduced in size and each mate undergoes brood divisions, forming numerous naked, single-nucleated, round cells, the true pairing cells. These unite two and two to form uninucleated spores, which become oat-shaped, obtain a dense cyst wall, and are named pseudo-navicellæ. Each spore undergoes again brood division to form eight sporozoites, completing the developmental cycle. Probably the spores swallowed by birds and discharged with their excrement are ingested by the earthworm and opening in its gut migrate to the seminal vesicles. As may well be imagined, the sequence of these events has only been established with tolerable certainty by the labours of many workers and represents a large amount of careful observation.

The life-histories of some of the Coccidiaceæ follow. The members of this family are the cause of various diseases, one form producing the affection known as coccidiosis multiplying in the liver of young rabbits, another causing the dysentery of cattle in the Alpine pastures, and probably also another being existent in man in molluscum contagiosum and the oriental sore of Asia. Then come the Hæmosporidia, one of which Golgi demonstrated to be present in the blood of patients suffering from intermittent fever, the maturation of the schisont and liberation of the sporozoites coinciding with the fits of the fever. Manson suggested to Ronald Ross that this parasite might have, like the nematodes that give rise to filarial hæmaturia, an alternating life in gnats or mosquitoes and thus, M. Hartog remarks, "inspired a most successful work" with which we are all now familiar. The whole life-history is here most instructively given. The "pébrine," or silk-worm disease, is caused by sporozoa belonging to the closely allied myxosporidiaceæ.

The Flagellata have been chiefly studied by botanists but they are here given in considerable detail, with many illustrations. They are of great interest as they are represented by numerous parasites in the blood or internal cavities of man and the higher animals; some are apparently harmless, while others are of great malignancy. The genus trypanosoma Gruby contains various species that are very destructive. Thus, although trypanosoma Lewisi, which is of common occurrence in rodents, appears to be relatively harmless, the trypanosoma Evansi is the cause of the "surra" disease of ruminants occurring in India and is probably communicated by the bites of large brown flies believed to belong to the tabanidæ or breeze flies. Trypanosoma Brucei, transferred to cattle by the tsetse fly, glossina morsitans, in Equatorial Africa, renders whole tracts of country impossible to the horse or ox by producing the deadly nagana disease. A trypanosoma found in Algeria and the Punjab, which is the cause of "dourine," infects horses and dogs; another trypanosoma causes mal-de-caderas in South America, an epidemic paralysis of cattle. The sleeping sickness, again, of the west district of tropical Africa is caused by a trypanosoma and the blood in relapsing fever contains a wriggling parasite allied to a trypanosoma; others, almost as important, are the closely allied preponema, which, derived from a tick, is found in the tropical disease framboesia or yaws (parangi) and the piroplasma, producing the Indian maladies known as kala-azar and oriental sore. Evidence is accumulating that the treponema pallidum, Vuillemin or spirochæta pallida is the cause of syphilis, L. B. Goldhorn having found it in the blood of 60 out of 68 patients suffering from that disease.

Our knowledge of the Porifera, or sponges in the vernacular, known by the latter appellation (σπογγία) to Aristotle and named πολύτρητος or many-holed by Homer, has been greatly extended of late years, and the attention that has been bestowed upon them is to some extent demonstrated by the number of new terms it has been found necessary to coin to describe the several features, as, for example, the "oscula," or large openings of the excurrent canals; the "ostia," or smaller apertures of the incurrent canals; the "prosopyles," which are the orifices of the terminations of the incurrent canals, where they open into the subspherical sacs termed flagellated chambers, and the "apopyle," or wide opening by which the chambers open into the excurrent canals; the "ectosome," or part destitute of chambers, and "choanosome," or chamber-bearing region; the "pinacocytes," or cells covering all the free surfaces; the "choanocytes," or flagellum-bearing cells; the "collencytes," or cells with clear protoplasm and filiform processes; "scleroblasts," or spicule cells; and "archæocytes," or cells of independent origin. Of each of these the reader will find a full description.

In speaking of the development of the spicules in sponges Igerna Sollas states that most spicules of which the development has been traced originate in a single dermal cell; the tri- and quadri-radiate spicules have each one cell to each spicule in Clathrinidæ, but in the Sycetidæ the tri-radiate spicules originate in a single cell. It is there stated that monaxon spicules, if not of large size, undergo their entire development within a single scleroblast, of which a figure after Maas is given in the text. This does not appear to be true in all cases, for W. Woodland, who has studied the spicule formation in Sycon coronata and Sycon ciliata, states that no trace of the spicule in these species occurs until the mother cell has constricted into two nucleated portions; the tri-radiates are derived from three mother cells which have associated together and built them up by their six-division products.

Chapters X. to XV. inclusive are from the pen of S. J. Hickson and are devoted to the Cœlenterata and Ctenophora and are therefore occupied with a description of the hydra, long ago rendered conspicuous by the writings of Trembley, and the hydraform polypes, the medusæ and the corals. Amongst these are some remarkable examples of mutualism. Thus, stylactis vermicola, one of the hydrozoa, is found only on the back of an aphrodite that lives in the ocean at the great depth of 2900 fathoms, or upwards of three miles. The stylactis minoi is spread over the skin of the little rockperch, minois inermis, found at depths of from 45 to 150 fathoms in the Indian seas, giving it a deceitful resemblance to the incrusted rocks of its environment. Amongst the hydrozoa are described the families of Sertulariidæ or sea-firs and Plumulariidæ, which are said to contain more than one-fourth of all the hydroids of the world. The beautiful forms of the medusæ, with the extraordinary structure, organisation, and functions of various members of the order Siphonophora, are here given in detail. In some instances there appears to be a colony of individuals in which the division of labour is carried to an extraordinary extent, whilst by some naturalists the siphonophoran body is regarded, not as a colony of individuals, but as a single individual in which the various organs have become multiplied and dislocated.

The Echinodermata, the account of which constitutes the last section of the volume, include the star-fishes, brittle stars, sea-urchins, and sea-cucumbers, animals that are exclusively marine and with the exception of the holothuria are of little value as a source of food to man, whilst some are active agents in the destruction of oyster beds. Nearly all have calcareous plates in the skin which often project as spines, whence the name of the class. They present radial symmetry, as prominently exhibited in the star-fish. They have a mouth and an anus which begin and end an alimentary canal lying in a cœlom or body cavity the walls of which give origin to the genital cells, no definite circulatory

system, and a nervous system without any definite enlargement or brain. There is a peculiar series of organs known as the water-vascular system. This forms a ring round the mouth whence branches extend into the rays and these thrusting forth processes, named podia, aid in locomotion. From the ring also extends a vertical vessel, the stone canal, that communicates with the exterior by an opening closed with a sieve-like plate, the madreporite.

The illustrations in this work are very numerous; the greater number are from the best authorities but many in each division are original. They add very greatly to the value of the work. We venture to make two suggestions: one is that in view of the declining interest in, and knowledge of, the Greek language the etymology of the terms used in designating the orders and genera should be given either, as is sometimes practised, in a bracket after the word in the index, or in a footnote in the page where they are first encountered. Such terms as Eleutherozoa and Pelmatozoa Myriothelidæ, Pelagohydridæ, nematophorous, and pseudopodia are robbed of half their uncouthness and are far more easily remembered by the student when their derivation and meaning are known. The other suggestion is that a few pages might be devoted without going into great detail to the means of preparation for the examination of many of the lower forms under the microscope. The volume well maintains the high standard of the preceding volumes of the same series.

The Dynamics of Living Matter. By JACQUES LOEB, Professor of Physiology in the University of California. London: Macmillan and Co. New York: Columbia University Press. 1906. Price 12*s.* 6*d.*

Professor Loeb has adopted a title for his book which must naturally arouse the interest alike of the biologist and of the physiologist. To those who are not already familiar with the author's work and writings the opening paragraph of his first lecture will at once make apparent the trend of his mind. It sets forth the object of this present book and also the line of his researches so clearly and concisely that we may quote it in full. "In these lectures we shall consider living organisms as chemical machines, consisting essentially of colloidal material which possesses the peculiarities of automatically developing, preserving, and reproducing themselves. The fact that the machines which can be created by man do not possess the power of automatic development, self-preservation, and reproduction constitutes for the present a fundamental difference between living machines and artificial machines. We must, however, admit that nothing contradicts the possibility that the artificial production of living matter may one day be accomplished. It is the purpose of these lectures to state to what extent we are able to control the phenomena of development, self-preservation, and reproduction."

With the means at present at our command we can only approach the phenomena of living organisms on chemico-physical lines with any hope of explaining their nature. The chemical dynamics of inanimate nature have not only formed the starting ground for all research into the realm of living things but have also served to carry us as far as we have penetrated. Professor Loeb is not, however, content to regard them as a "workable hypothesis" but shows a firm conviction that they should carry us eventually to the innermost mysteries of life itself. He points out that these "chemical machines" are built by, and derive their energy from, chemical processes and proceeds further: "It is neither our intention nor is it possible for us to give an exhaustive analysis and we shall only go far enough to satisfy ourselves that no variables are found in the chemical dynamics of living matter which cannot be found also in the chemistry of inanimate nature." If the author means by this last sentence that no "variables" have been found so far as research has carried us we may be satisfied with the statement and admit that his survey of our present knowledge confirms it, but we have a strong suspicion that his analysis of the chemical processes of organisms should convince the reader that there are no "variables" in living phenomena which cannot be found in inanimate nature, and this we hardly think will be the result in many cases. Such a survey of our present knowledge of the phenomena of life, interesting as it is and disclosing a quite impressive array of mysteries unveiled and labelled, must impress the minds of many rather with the insignificance of the conquests in comparison with the vastness of the territory yet unsubdued. The author's mind, however, appears to run on contrary lines. The elucidation of a detail among an immense complex of phenomena would seem to afford for him convincing evidence for the unravelling of the whole. In dealing with the phenomena of consciousness, which the author only refers to very briefly in this work, he defines it as a function of the mechanism of associative memory located in the cerebral hemispheres. Yet the data which he brings forward to support this mechanical view are of the most meagre description. He alludes to the fact that substances which are easily soluble in fat are also strong anæsthetics—ether, chloroform, and so on—and that ganglionic cells are especially rich in lipoids, and also to the observation of Speck "that if the partial pressure of oxygen in the air is lowered to below one-third of its normal value, the fundament of mental activity—namely, memory—is almost instantly interfered with, and total loss of consciousness rapidly follows." But although we may not wholly sympathise with Professor Loeb's philosophy, our appreciation of his work is in no way diminished on that account. He wastes no space on speculations and theories. He gives a very concise and wide survey of the researches on chemico-physical lines in all branches of physiology and biology, researches which have been enriched in no small measure by his own experimental work, and the book forms a most useful milestone in the journey of investigation into the phenomena of living things.

In this survey his first lectures deal with the chemical processes of the living cell and he discusses the theory of enzymes and their catalytic action, Traube's theory of colloids and their semi-permeability, and foam structures and surface films and their probable rôle in cell activities. The chapter on electrolytes dealing with the author's theory of irritability of tissue and muscular contraction based upon the interaction of certain basic ions, notably calcium and sodium, is especially interesting and suggestive. The phenomena of tropisms—heliotropism of plants and animals, galvanotropism, geotropism, and so on—are dealt with very fully and the author shows that many so-called instinctive actions and reactions of living organisms are referable to some one or other of these tropic processes. Under "fertilisation" the probable chemico-physical processes involved in fertilisation and development of the egg are discussed. The author shows that it is possible to cause the normal development of eggs of certain organisms—for instance, *Strongylocentrotus purpuratus*, a sea urchin of the Pacific coast—without fertilisation by spermatozoa. This he has accomplished by placing the eggs for a minute in 50 cubic centimetres of sea water to which have been added three cubic centimetres of a decinormal solution of a fatty acid—formic, acetic, butyric, and so on—and then placing them in 100 cubic centimetres of sea water for from 25 to 50 minutes, the concentration of which has been raised by adding 15 cubic centimetres of a 2·5 n solution of sodium chloride. Mendel's and de Vries's theories of heredity, the determination of sex, and the processes of regeneration form the subject matter of the concluding chapters.

From this brief outline of the work it will be seen that the

book covers a large field and should appeal to the student of any branch of biological science.

The Nature of Tick Fever in the Eastern Part of the Congo Free State, with Notes on the Distribution and Bionomics of Ornithodoros Moubata and an Appendix on its External Anatomy. Liverpool School of Tropical Medicine, Memoir XVII. Fifth Interim Report from the Expedition to the Congo, 1903, 1904, 1905. By J. EVERETT DUTTON, M.B. Vict., JOHN L. TODD, B.A., M.D. McGill, and ROBERT NEWSTEAD, A.L.S., F.G.S. Liverpool: University Press. 1905. Pp. 26 and 4 plates. Price 7*s.* 6*d.* net.

A MELANCHOLY interest attaches itself to this publication, for one of the authors, the late Dr. J. E. Dutton, of the Liverpool School of Tropical Medicine, contracted recurrent fever during the prosecution of his researches. This attack was a severe one, Dr. Todd tells us, and unfortunately the eager mind of Dr. Dutton prompted him to engage again in the work before he had thoroughly recovered, with the result that another distinguished investigator has fallen a victim to his zeal for medical science. Dr. Dutton and Dr. Todd in November, 1904, communicated to the Liverpool School of Tropical Medicine the fact that they had discovered a spirochæta to be the pathogenic agent of the human tick-fever occurring in the oriental possessions of the Congo Free State, and also that they had been able to infect monkeys with spirochætæ through the bites of ticks. Since their arrival in the Congo district their attention had been particularly drawn to the "human tick" and its evil properties. They saw for the first time cases of "tick disease," and as the result of their careful researches from clinical material, from transmission experiments with ticks, and from information and reports received from residents in the Congo, they are now able to show that "tick fever" in the oriental province is a relapsing fever produced by a spirochæta, probably identical with spirochæta Obermeieri, and that this organism can be transmitted by the bite of the tick. In addition they also succeeded in one experiment in transmitting to another animal the spirillum by the bites of young ticks newly hatched in the laboratory from eggs laid by the infected parents.

In the memoir under review the history of human tick-fever in the oriental province of the Congo Free State is first portrayed. Dr. Livingstone, it appears, suffered annoyance from ticks whilst at Nyangwè in 1871; again, Dr. Hinde, accompanying an expedition against the Arabs in 1892–94, described ticks, but neither of these explorers believed the tick to be harmful, an opinion which the authors found to be held by practically all the Europeans of the district whom they met. So much was this the case that all natives reporting themselves ill from the bites of these insects were held to be malingering. This mistake was no doubt due to the fact of the "human tick" resembling to the casual observer the ordinary "harmless" "cattle tick." But the microscopical investigation of the authors soon revealed the essential nature of "tick fever" which had previously been confounded with malarial fever.

It would appear that one attack confers subsequent immunity; strangers are particularly susceptible and the majority of the cases in the district in which the researches of the authors were made occurred amongst the newcomers. The mortality does not seem to have been very great amongst those cared for and not exposed to fatigue and hunger, although under adverse conditions the death-rate may be high. The incubation period between the bite of the tick and the manifestation of the first symptoms of the disease Dr. Dutton and Dr. Todd, from their experience, state to be about one week, although they say that occasionally symptoms are said to follow within a few hours of the bite.

As regards the symptomatology of the disease slight prodromata may be noticed. In all cases the fever has always been sudden in its onset and in no instance preceded by a distinct rigor, in this respect differing from the onset of relapsing fever observed in cold climates. There are great prostration, severe backache, bone-ache, and headache, usually frontal. The patient with difficulty takes his food. Vomiting generally occurs but not to any great extent. Slight diarrhœa is fairly constant. Here, again, the symptoms differ from the relapsing fever of cold climates, where the vomiting may be incessant and constipation is the rule. There are, lastly, usually three or four attacks, each lasting for three or four days with intervening periods of from five to 19 days. The attacks end often in more or less profuse perspiration. The spleen is sometimes but not always enlarged. The complications observed were herpes, epistaxis, and hiccough. Although there is great prostration whilst the attack is present, yet with the fall of the temperature there is a quick return to comparative health. This account of the symptoms then concludes with some excellent clinical reports of the cases observed.

The authors next give a description of the disease in animals—in the rabbit, guinea-pig, rat, and monkey. For the demonstration of the spirochæta they found the best method to consist in the searching with a high power of tick dehæmoglobinised blood films stained by some modification of Romanowsky's method or with a weak solution of carbol fuchsin. They did not find centrifugalising the blood to produce nearly so good results with spirochætæ as with trypanosomata. This section of the report concludes with an account of the distribution of the "human tick" in the Congo Free State and some notes on its bionomics.

Mr. Newstead contributes at the close of the memoir a succinct account of the external anatomy of the ornithodoros moubata which will be found very valuable to workers on this subject.

In conclusion, we have only to add that we have found this to be a very interesting memoir. We notice that Dr. Todd, in the preface, generously takes upon himself any weakness that may exist in the report but such weakness seems to us to be conspicuous by its absence.

LIBRARY TABLE.

Éléments de l'Electrothérapie Clinique. By A. ZIMMERN. Paris: Masson et Cie. 1906. Pp. 393.—This work, which has a preface by Professor Bergonié, issues from the Electrotherapeutic School of Bordeaux, of which d'Arsonval was the founder. The work seems to merit the praise which Professor Bergonié lavishes on it with no niggard hand, especially as being a practical work and up to date. He says with justice, "If electrotherapy has made progress so have the older methods. In the course of some 10 years an electro-therapeutic method may be replaced by a dietetic or surgical treatment and *vice versâ*. The treatment of uterine fibroids has altered since the days of Apostoli, just as the surgical treatment of cutaneous epithelioma no longer exists since the vogue of electrotherapeutic treatment by the x rays or the zinc ions.' M. Zimmern does not discuss all the possible uses of electricity but only its application to those diseases for which the electro-therapeutic treatment is the treatment *par excellence*. The illustrations are admirable and appear to have been drawn to illustrate the book itself. More especially we may notice the exceedingly clear definition of the motor points and the figures illustrating the clinical application of the various forms of electrotherapy. It is to be regretted that manuals such as this do not include a chapter on the use of the Roentgen rays, although some 50 pages are devoted to a description of the high-frequency currents. The theory of the ions and the electrolytic introduction of medicaments are very fully treated. The work

proceeds very much on the lines of Guilleminot's Medical Electricity which was recently reviewed in these pages.

Eyesight in Schools. By C. C. CALEB, M.B., M.S. Durh., Professor of Physiology and Botany, Medical College, Lahore; lately Surgeon to the Ophthalmic and Aural Out-patients' Department of the Mayo Hospital, Lahore. Lahore: M. Gulab Singh and Sons. 1906. Pp. 79. Price 1 rupee 8 annas.—This brochure, which is written under the orders of the Director of Public Instruction, Punjab, and with the approval of the Punjab Text-book Committee, is the result of a letter from the author drawing attention to the serious increase of short-sightedness amongst the pupils attending the educational institutions in the Punjab. It is addressed to the school teacher in the belief that he, more than any other public servant, can render effective aid in preventing the deterioration of eyesight in school children. Only those who have attempted to explain a highly technical subject in such simple language as can be understood by the uninitiated can fully appreciate the difficulties of the task. In the early chapters of the work dealing with the structure of the eyeball, the functions of the eye as an optical instrument, accommodation, and convergence the author has succeeded in an admirable manner. Some such description might with great advantage be placed in the hands of all school teachers, not only in India, but also in England. In the chapter on defects of eyesight the focus defects are treated adequately, though the statement that "the retinal image of an eye affected with astigmatism is a line" is by no means strictly accurate. The view that granular lids, meaning thereby trachoma, may be produced by eye-strain cannot be accepted. The chapter on the examination of the eye is extremely faulty. The statements that "no special training or costly apparatus is necessary" and that "the method to be used is itself so simple that any intelligent teacher should be able, without any expert assistance, to determine not only the acuteness of vision but also the quality of any existing focus defect" are much to be deprecated. The inclusion of a pin-hole disc in the armamentarium is at least as likely to lead to confusion as to a correct diagnosis, and the addition of one convex and one concave lens (1 D. strength) is little adapted to elucidate the case. We have already expressed the opinion[1] that school teachers might well be instructed how to test the visual acuity of the children, but the determination of the error, if any be present, must in all cases be referred to an ophthalmic surgeon. The chapter on ocular hygiene is excellent.

Christmas and New Year Greeting Cards. Raphael Tuck and Sons, Raphael House, London.—We have again received a goodly collection of these artistic productions, which embody all those features now generally associated with the name of Messrs. Tuck—originality of design, artistic merit, excellence of execution, moderate cost, and a continued effort to enhance their own well-earned reputation.

[1] THE LANCET, Oct. 20th, 1906, p. 1061.

ROYAL SANITARY INSTITUTE.—Among the recent Fellows elected are Mr. Jonathan Nield Cook, medical officer of health of Calcutta; Dr. David Samuel Davies, medical officer of health of Bristol; Dr. Sidney Davies, medical officer of health of Woolwich; and Dr. W. Arnold Evans, medical officer of health of Bradford.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following candidates having passed the necessary examination have been admitted Fellows of the College: A. Levenston, L.R.C.S. Irel., &c., Captain, I.M.S., W. L. Martin, L.R.C.S. Irel., &c., Surgeon, R.N., and A. W. Tuke, M.R.C.S. Eng., &c., Captain, I.M.S. The following candidate passed the primary part of the examination: H. S. Meade.

RECORDS OF MEDICAL OFFICERS IN EGYPTIAN PAPYRI.

THE newly published volume of Egyptian papyri excavated from the rubbish heaps at the village of Hibeh in the Fayoum contains two documents concerning the payment of the physicians' tax. One of these is a promise to pay addressed by a military settler to the physician himself and reads as follows:—

..... a Cyrenean, of Zoilus' troop, private, to Eucarpus, physician (*ἰατρῷ*) greeting. It has been ordered that I shall pay you ten artabæ of olyra, or four drachma as the physicians' tax for the 38th year. These I will pay to you in the month Dasius, and if I fail to pay you I will forfeit to you as the value of each artaba, 2 drachma. Good bye. The 37th year, 6th of Payni.

The date of this undertaking is 248 B.C. The second papyrus which, like the first, has been recovered from the cartonnage of a mummy, gives a receipt for the payment of the tax; omitting dates, it reads as follows:—

Apollophanes to Theophilus greeting. We have had measured out to us by Stratius on behalf of Diodorus son of Cephallon, decurion of Zoilus' troop, through the Commogrammateus, Eupolis, for the 17th year 5 artabæ of olyra as the physicians' tax (*ἰατρικὸν*).

This impost for the maintenance of public physicians has been found recorded upon papyri previously edited in the Petrie collection where the amount was two artabæ of wheat. No previous statement of the sum required being paid directly to the physicians as is the case in the first of the two records just quoted has as yet been published, but in a papyrus found at the ancient Egyptian city of Tebtunis, containing long memoranda of payment of private accounts by a certain Menches in the time of Ptolemy Soter II., are notes of his paying his doctor's bills which are placed beside barber's fees. The medical disbursements are set forth for five occasions in this ancient diary of daily expenses.

A much more modern manuscript so far as papyri are concerned, but still of considerable antiquity, is a papyrus of Roman times, also from the Fayoum. Its date is about A.D. 140 and it preserves for us a petition addressed by Marcus Valerius Gemellus, a physician, requesting to be relieved of his duties on the ground of ill-health. The papyrus is fragmentary, and in the first six lines, of which a clear interpretation cannot be given, Gemellus had evidently introduced as a precedent some previous decision of a prefect relieving some physician from a similar lay appointment, and it is to this that reference is made in the slightly mutilated words towards the termination of the petition and at the opening sentence.

To Galus Avilius Hellodorus, prefect, from Marcus Valerius Gemellus. Contrary to the prohibition I was made a superintendent of confiscated estates near to the villages of Bacchias and Hephæstias in the division of Heraclides of the Arsinoite nome, and after laboring for a period of four years at the post I became very weak, my lord: Wherefore I entreat you, my preserver, to have pity upon me, to be released from my duties, so that I may be able to recover from the effects of my labors ..... and ..... to add instructions that complete exemption from compulsory services be granted to persons practising the profession of physician and especially to those who have passed the examination, like myself, that so I may experience your clemency. Farewell.

Medical men, however, do not appear to have been very successful in obtaining exemption; for some half century later we find the report of a judgment given in court in the case of a claim for immunity for some public service on the ground of the petitioner being a doctor. The judge desired a scientific proof of the claimant's medical knowledge. The document is one of a series of such, probably a collection of some advocate who found them useful in pleadings in similar cases for medical men. The others unfortunately are too mutilated to make any connected sense. One of them evidently concerns a physician; a decision is recorded upon a request for exemption from some non-medical appointment, his right thereto being sustained. The date of this judgment is the twenty-first year of the Emperor Hadrian. The prefect Eudæmon was in office from 137 to 139 A.D., so that the text which follows was also inscribed under Hadrian.

Copy of a memorandum of Valerius Eudæmon, prefect in the ..... year of Cæsar our sovereign; (month) Phamenoth. Application of Peanis. Peanis appeared and said, "I am a doctor by profession (*ἰατρὸν ὑπάρχων*) and I have treated those very persons who have assigned me a public burden." Eudæmon said, "Perhaps your treatment was wrong. If you are a doctor officially practising mummification, tell me what is the solvent? and you shall have the immunity which you claim."

It is deeply to be regretted that Psasnis's reply and the result thereof are not forthcoming. The above papyri came from Oxyrhynchus, as, too, does the following, which is a report by a public physician to the county functionary, stating that in accordance with his instructions he had investigated the causes of a death that had taken place. The date is known from the name of the "strategus" to be A.D. 173. Somewhat similar documents are in the papyrus collection at Berlin.

To Claudius, Strategus, from Dionysus, son of Apollodorus, son of Dionysus, of Oxyrhynchus, public physician, ὑμῶν ἰάτρος. I was to-day instructed by you through Heraclides, your assistant, to inspect the body of a man who had been found hanged, named Hierax, and to report to you my opinion upon it. I therefore inspected the body in the presence of the aforesaid Heraclides at the house of Epagathus in the Broad Street quarter, and found it hanged by a noose which fact I accordingly report.

Another official medical report, however, is extant from Oxyrhynchus which explains itself. Its date is A.D. 325:—

In the consulship of Paulinus and Julianus, the most illustrious. To Flavius Leucadius logistes of the Oxyrhynchite nome, from the Aurelii ..... Didymus and Sylvanus of the illustrious city of Oxyrhynchus, public physicians. Your grace sent us in consequence of a petition received by you from Aurelius Dioscorus to make a report, in writing, upon his daughter, who as he complained had been injured by the fall of his house which had occurred. We accordingly went to Dioscorus' house and saw that the girl had several cuts in her hip and wounds near the shoulder and on the right knee. We therefore present this report.

Although the medical examination is not recorded it is certain from what we know of Roman army matters and the physicians attached to the legions and recruiting depôts that the following deed of exemption from serving would not have been given without expert medical inspection. The date of its engrossment is A.D. 52.

Copy of a release dated and signed in the twelfth year of Tiberius Claudius Cæsar, Augustus, Germanicus, Imperator. Phamenoth 29. Release from service was granted by Cnelus Vergilius Capito, prefect of Upper and Lower Egypt, to Tryphon, son of Dionysius, weaver, suffering from cataract and shortness of sight, of the metropolis of Oxyrhynchus. Examination was made at Alexandria.

The last papyrus[1] from this old city yet published mentioning a medical man is of A.D. 572 and merely consists of an allusion by a lady to her husband whom she styles a chief physician and who gives his consent to her undertaking to pay the taxes on some property forming her dowry. Among the literally tons of papyri now at Oxford still undeciphered there are doubtless many more manuscripts describing medical matters.

MEDICAL MEN AND MUNICIPAL HONOURS.

THE following is a list of members of the medical profession who have been elected or re-elected to the mayoral chair, together with brief notes of their medical and municipal careers so far as we have been able to ascertain them.

Brighton.—Mr. Henry Gervis, M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., who has been elected Mayor of Brighton, is the son of Dr. H. Gervis, consulting obstetric physician to St. Thomas's Hospital. Although he has had only two years' service on the Brighton town council he was for several years a member of the district council at Bishop Stortford and his work on that body amply justifies his fellow townsmen of Brighton in electing him to the mayoral chair. Dr. Gervis was educated at Mill Hill School and Trinity College, Cambridge. He received his medical training at St. Thomas's Hospital where he became house surgeon and resident accoucheur. For some time he practised at Bishop Stortford and subsequently went to Brighton and entered the Brighton town council as a representative of the Regency Ward in 1904. His zeal for municipal work has caused him to be elected on as many as five committees and he is also a member of the Sewers Board. In the eight years during which he has resided in Brighton Dr. Gervis has won the esteem of all with whom he has come in contact.

Conway.—Mr. R. A. Prichard, L.R.C.P. Edin., M.R.C.S. Eng., J.P. for the county of Carnarvon, who was Mayor of Conway from 1893 to 1897, was last year again chosen to represent his fellow townsmen in the civic chair. He has now been re-elected. He has been President of the North Wales branch of the British Medical Association and is a surgeon-colonel (V.D.) of the 3rd V.B. Royal Welsh Fusiliers.

Hackney.—Mr. Frederick Montague Miller, M.R.C.S. Eng., L.R.C.P. Lond., the Mayor of Hackney, was educated at Merchant Taylors' School, whence he took a perpetual scholarship to St. Thomas's Hospital and was trained under Dr. Peacock, Mr. Le Gros Clark, and Sir John Simon. He became L.R.C.P., M.R.C.S., and L.S.A., and from that time till the present he has practised in the north of London. He has always taken a great interest in everything connected with Hackney and commenced his municipal life six years ago when Hackney was incorporated. He has been an active member of the works and general purposes committee of the borough and chairman of the public libraries committee, being instrumental in obtaining a gift of £25,000 from Mr. A. Carnegie for the erection of a central and two branch libraries. He also obtained a gift of a site for a branch library from the Rhodes trustees through the late Colonel Frank Rhodes. With Mr. Francis Howse, the ex-mayor, and others, he joined in the optional deposit for the purchase of the Springfield Park estate which has since been acquired by the London County Council. He has been chairman of the public libraries committee since its inception and hopes to signalise his year of office by seeing the central library completed during his year of office as mayor.

Lancaster.—Mr. William Cowan Hamilton, M.B., C.M. Glasg.

Macclesfield.—Mr. John Somerville, F.R.C.S. Edin., L.R.C.P. Edin., who occupies the mayoral chair of Macclesfield, has been in practice in that town for 35 years. In 1872 he was appointed honorary surgeon to the Macclesfield General Infirmary and in 1901, after 29 years' service, was appointed consulting surgeon. He is certifying factory surgeon for Macclesfield.

Oldham.—Mr. Robert Gourlay, M.B., C.M. Glasg., the mayor of Oldham, was born at Kirkintilloch, near Glasgow, and received his medical education at the University of Glasgow, where, before graduating M.B., C.M. in 1883, he won the Johannes Hunter medal in the senior division. He went to Oldham in 1884 and commenced practice there. He was first returned to the council in 1889 for St. James's Ward after a contested election; in 1892 he was successful again; in 1895 he was returned unopposed; and in January, 1897, he was made an alderman. He retired from the council in 1901 and was re-elected for Waterhead Ward in 1904. During his membership of the council Dr. Gourlay has rendered to his adopted town valuable service, especially on the watch, health, gas, electricity, park, and education committees. Ambulance work has also been helped forward by him and he has always taken a personal interest in athletics and physical development. He has been honorary president of the Oldham Caledonian Society since its formation.

New Romney.—Alderman Richard R. Daglish, M.R.C.S. Eng., L.S.A., J.P., of New Romney, Kent, has been elected Mayor of that old and historical Cinque port for the eighth time since September, 1885, when the ancient borough was granted a new charter in accordance with the Municipal Corporation Acts, although under the old charter granted by Queen Elizabeth in the fifth year of her reign the corporate body consisted of a mayor, jurats, and commonalty. Mr. Daglish qualified as a medical man in the year 1864 and received instruction at Liverpool and at Guy's Hospital, London. He is an Admiralty surgeon and agent, a district medical officer, the workhouse medical officer, and surgeon to the county constabulary. New Romney has been constant to some of its previous mayors, but Mr. Daglish seems to have established a record for the borough.

Southwold.—Mr. Basil Hubert Howard Tripp, M.R.C.S. Eng., L.R.C.P. Lond.

A NURSING EXHIBITION.—On Nov. 22nd a nursing exhibition was opened for a few days at St. George's Hall, Mount-street, W., organised by the provisional committee of the National Council of Nurses. The exhibits consisted of maternity outfits, apparatus used in nursing the tuberculous, and general nursing equipment. Several of the articles exhibited had been invented by nurses. Conferences in connexion with the exhibition were also held on the care of the consumptive, maternity nursing, and mental nursing.

[1] This is papyrus No. 10,085 of the Cairo Museum.

THE LANCET.

LONDON: SATURDAY, DECEMBER 1, 1906.

Meat Inspection.

THE betterment of the food-supply of the public is a subject to which, as our readers are aware, THE LANCET has ever devoted constant attention; nor, as testified by the existence of the Sale of Food and Drugs Acts and the appointment of public analysts universally throughout the country, have our labours been without marked beneficial results. In recent issues we have called attention to the need for fresh legislation to deal with the latest fraudulent developments in connexion with the butter trade; the injury in these is directed more against the interest of the honest trader than against that of the public health, although the latter must not be ignored; in another phase of our food-supply, however—namely, in the disposal of diseased animals for food—there is an even greater need of fresh legislative interference, for in this case, although there is equally an injustice done to the honest trader, there is, what is more important, the gravest possible risk to the health of the consumer.

As the law stands it is true that heavy penalties and even imprisonment can be enforced against persons found in possession of diseased meat, if it is proved that the latter is intended for the food of man. The sections of the Public Health Acts which deal with this subject are satisfactory enough so far as concerns the penalties that may be inflicted when a conviction is obtained; their weakness, however, lies in the difficulty that there is in obtaining a conviction and the impunity with which diseased animals may be sold in open market, slaughtered in obscure slaughter-houses, and disposed of to the unsuspecting public. Those responsible for the protection of the public against bad meat are the sanitary and meat inspectors appointed by local sanitary authorities. That these officers do their duty to the best of their ability, at any rate in the majority of cases, there is little room for doubt, but there is still less room for doubt that in most large towns their efforts are largely unsuccessful. The reasons for this are not far to seek. The inspectors have, roughly, two opportunities of examining meat, the first in the slaughter-house when the animal is killed and the second when the carcass, either whole or in joints, is exposed for sale in the butcher's shop; for all practical purposes this second may be ignored, for after the intestinal organs and offal have been taken away from a carcass and the latter has been cut into joints it needs very careful and minute examination, such as it is impracticable to bestow on all the butchers' shops of a large town, to detect disease in meat, except, of course, in its very grossest forms. It is therefore at the slaughter-house when the animal is killed that the inspector's principal opportunity for seizing and destroying diseased meat occurs. But here is another difficulty. Very few large towns are provided with public slaughter-houses; consequently the slaughtering is done, probably at about the same time of day, in numerous slaughter-houses situated in various parts of the town and often at considerable distances from each other. Now as the number of inspectors in a town is always very limited and their duties are multifarious it is obvious that systematic inspection of all animals killed in these scattered slaughter-houses is quite out of the question, and the few cases in which diseased animals are so discovered is due either purely to chance or to some information privately afforded by an enemy of the butcher. Moreover, the difficulty of detecting dishonest butchers is increased by the fact that diseased animals are usually killed either very early in the morning or late at night when there is less likelihood of a visit from the inspector. A procedure which would obviously effect a great improvement in the inspection of meat is the provision of public slaughter-houses in towns and the abolition of all private slaughter-houses, and in this respect the Bill introduced in October in the House of Lords by Lord DONOUGHMORE is distinctly a valuable measure, for it gives to local authorities power, after having provided an efficient public slaughter-house, to acquire and to close all private slaughter-houses. But even if this Bill becomes law there will still remain abuses which are urgently in need of reform. One of the most scandalous of these is the impunity with which diseased animals are openly sold for food in country markets. It has long been known that in many markets no manner of supervision whatever is exercised over the animals sold; indeed, only recently in the columns of our contemporary, the *Morning Post*, a correspondent quotes numerous instances in which diseased animals, at prices varying from 1*s.* upwards, have been disposed of without any interference on the part of the local sanitary authority. In some markets it is true proper supervision is exercised but it is a matter of common knowledge that in many others the very opposite is the case; in these latter, which are usually in the proximity of large towns, the diseased animals are driven or, if too feeble to walk, are carted away to an obscure private slaughter-house where all traces of disease are removed and the meat is disposed of through unscrupulous traders to the long-suffering public.

The immunity which persons engaged in this class of business enjoy is due to the fact that it is almost impossible to detect disease in meat if it has passed through the hands of a slaughterer skilled in this particular line. A large proportion of the cows which are sold at these markets are obviously wasted and in the last stages of tuberculosis, and it cannot but be concluded that they have been used for the supply of milk up to a point when their owner feared that they would die and he has then sent them to market in order to realise a few more shillings to add to the illgotten pounds which he has already made by the sale of their tuberculous milk. It is to remedy these flagrant abuses that we suggest that fresh legislation is urgently needed. If meat inspection in this country is to become anything more than a name it must be thoroughly reorganised; the present machinery has been tried and found wanting; it is neither the fewness of numbers nor the lack of will or ability on the part of sanitary inspectors that is at

fault. No matter how complete the sanitary staff of a town may be, or how well qualified may be its members, it is impossible for them, in the first place, to inspect properly all the animals killed in that town if there are numerous private slaughter-houses, nor, if these latter are abolished and public slaughter-houses are established, will they be able to exercise any control on meat that has been killed in country slaughter-houses and brought covertly into their district. In Mr. JOHN BURNS the Local Government Board is credited with a chief who is determined to make his mark upon the sanitary administration of the country; we therefore venture, with all respect, to appeal to him to introduce legislation to deal with the unsatisfactory state of affairs that first allows tuberculous cows to be used on dairy farms and then, in addition to this iniquity, permits them to be disposed of for the food of man without let or hindrance.

School Bathing in Germany and Holland.

THE London County Council has issued, "for the information of the public," a report on the bathing arrangements of the elementary schools in Germany and Holland which is calculated to disturb many comfortable preconceptions. Half a century ago it was a common article of faith that the tendency of the Englishman to self-ablution constituted the differential phenomenon which chiefly distinguished him from "foreigners"; and our caricaturists in 1851 were never weary of illustrating the astonishment with which continental visitors to the Great Exhibition would naturally regard the various forms of apparatus for the promotion of cleanliness with which our bedrooms and dressing-rooms were supplied, or the supreme contentment with which they would themselves employ the pieces of the breakfast and tea services for the accomplishment of such an amount of ablution as they would consider sufficient. It was gravely related that continental servants objected to take situations in English families living abroad, on the plea that the English were such dirty people, "they were always washing themselves"; and it was an accepted tradition that the only personal cleansing practised by foreign ladies was to smear their faces with pomade and to wipe it off again. Whatever may have been the truth of the matter at that time in this country, the action of the London County Council would seem to suggest that we have now to learn some lessons in cleanliness from other European nations. Many successive travellers have borne witness that the operatives of Germany, of France, and of America are now clean and self-respecting people; that they frequently wash thoroughly and change their clothing before leaving their workshops to return home; and that their wives, their children, and their houses are as clean as they are themselves. It behoves Londoners of the same class not to lag behind. In the twentieth century cleanliness is essential to self-respect; and self-respect is always essential to improvement. An old English proverb which we have often heard misquoted, sometimes, with quite unconscious irreverence, even by Bishops, declares that cleanliness is next to goodliness, or, in other words, that those who are not "goodly"—i.e., beautiful—may at least be clean and to that extent attractive. The lesson is one well worth inculcating and the publication just issued by the County Council may have some tendency in this direction.

The report to which we refer is the account of an official visit by Dr. J. KERR and Mr. F. ROSE, on the part of the education committee of the Council, to 35 schools in 12 cities of Germany or Holland—namely, Wiesbaden, Mannheim, Frankfort, Karlsruhe, Munich, Nuremberg, Halle, Berlin, Hanover, Cologne, Düsseldorf, and Amsterdam. In all these, as generally throughout the countries visited, baths are provided in every school and every child, with the exception sometimes of the very young, bathes once a week. The precise arrangements differ, but as a rule the children stand in tanks of warm water to soap themselves and then have the soap washed off by a warm shower bath, gradually cooled as it is continued. There is a plentiful supply of towels and the bathing is controlled by a sufficient number of careful attendants. It is manifestly so conducted as to be pleasant to the children and to give them a constantly recurring experience of the comfort attendant upon a clean skin, so that it can hardly fail to lay the foundations of a habit likely to be enduring. In this connexion we may refer our readers to an annotation in our issue of Sept. 29th, p. 886, dealing with a paper read by Mr. ROSE before the Medical Officers of Schools Association in June last and entitled "The Use of Shower Baths in Schools in England and on the Continent." London ratepayers know only too well that the costly baths which have been erected by some municipalities do not appeal to the persons for whom they were presumably intended and do not pay the cost of maintaining them. Nevertheless, we are convinced that no thoughtful ratepayer will find fault with any effective measures for developing among elementary school children a practical knowledge of the pleasures of cleanliness. The report to which we refer may be, and ought to be, a useful step in this direction.

Wards for the Observation and Treatment of Temporary Mental Disorder in General Hospitals.

THE study of psychiatry has made rapid strides during the past generation and each decade sees it further raised out of the groove in which it had long rested. A few years ago, when discussing the subject of the treatment of temporary mental disorders, we urged upon the authorities to do something for patients requiring such assistance. At that time we referred to some of the difficulties involved in opening wards for mental cases in general hospitals and considered that the building of "reception houses" for these patients might be the best solution of the problem. The financial stability of the great London general hospitals has so markedly improved during recent years that with the continued generosity of the charitable public it is possible to consider whether their already wide scope of usefulness may not be even further increased. We still feel that "reception houses" for acute cases of mental disorder have great advantages over the present arrangement; nevertheless, we

realise that there are objections to them for the treatment of the very early cases. It is possible that the public would look upon such establishments in a very different light to that in which they regard the general hospital, and it is within the bounds of probability that in time stigma might be attached to residence in them. The pressing needs of the pauper public call for some provision to be made if possible for the treatment of early mental suffering.

For many years certain general hospitals have had an out-patient department for the diagnosis and treatment of mental disorders, and some authorities speak highly of the useful work accomplished in it. But the day is perhaps not far distant when the governors of general hospitals may be asked to consider the advisability of providing wards for the reception of suitable patients suffering from temporary mental disorder. Many Scotch physicians have already expressed themselves as favourable to such a proposal, and the Commissioners in Lunacy for Scotland state in their recent annual report that the authorities of the Edinburgh Royal Infirmary are willing to give the scheme a trial in the near future. Without doubt there are many objections in the way, both administrative and financial, and the question that will be asked is whether the prospects of doing good to the patients will in any way compensate for the difficulties to be overcome. Apart from the objection, which would undoubtedly be made, that the total number of beds available in most hospitals for persons suffering from acute physical disease is already inadequate to the demand, it would practically be found necessary to build special wards for the very exceptional class of case for which they are to be used. Here the financial element might prove a serious obstacle. Again, with our present knowledge, it is by no means easy to say that a given patient is suffering from a mental disorder which is not only temporary but is recoverable from within a reasonable time. It is clear that for a system to be of general value it must be capable of benefiting a goodly number and that its success or failure will be largely measured from this standpoint. In that the objections to, and the difficulties of, carrying out such a scheme are apparent to all, perhaps more profit may be derived by investigating what are the advantages to be achieved.

As previously stated, there are several hospitals which have an out-patient department for mental diseases. Now one of the greatest objections to such a department is that very many of these nervous cases require suitable food, rest in bed, and careful nursing, and although the advice given by the physician may be excellent it is practically impossible for the poor to carry it out. Clearly, then, to have a special ward set apart for the reception of such patients would prove a most useful adjunct to the out-patient department and would materially enhance its value. It must be borne in mind that there is no voluntary boarder system for paupers such as the law permits in the case of private patients in mental hospitals and licensed houses. Early treatment of mental disease for these persons is not considered necessary in this enlightened country: we seem to prefer to allow men to drift into advanced and ofttimes incurable insanity before granting to them proper means for obtaining relief. There is no place for the poor man to go for treatment when he feels that his mind is becoming unhinged, even if he is willing and anxious to do so. Such a patient must wait until his mind has become so far disordered that a certificate can be signed which would convince a British jury of his insanity; then, and not till then, is he considered a proper subject for treatment. True, a man may be sent to the workhouse infirmary for a few days, but the time permitted for observation is far too short and he is even then not eligible for this relief until he is deemed to be a lunatic. Nevertheless, this provision of the law does much good and enables many persons suffering from a temporary mental disorder to escape the stigma of certification. Dr. F. S. TOOGOOD in a letter to THE LANCET in 1905[1] stated that in 1904 out of a total of 7654 admissions of "alleged lunatics" sent to metropolitan infirmaries only 3716 were sent to asylums and 3155 were discharged cured within the period of 14 days, which constitutes the limit of legal detention in an infirmary or workhouse, and he further adds that if this limit were extended to double that period in all probability there would be a sensible addition to this number. Now even if it be granted that a fair proportion of these so-called cures break down again almost immediately there are still enough to prove that many temporary cases recover rapidly when treated.

Turning from the immediate advantages to the patient, the existence of special wards for mental cases in general hospitals would greatly assist the study of psychiatry; opportunity would be given for the investigation of mental disorder in its earliest phases. Insanity would take its place side by side with other branches of medicine and more men would be found who were willing to do research work in this increasingly important subject. A certain amount of instruction in the study of psychiatry is already necessary before a man is eligible to present himself for his final examination in medicine and surgery, but the value of the teaching would be greatly enhanced if students could daily observe the course of mental disease in cases in the wards of their own hospitals. Further, the presence of these special wards in a general hospital would be valuable for the more thorough training of the nursing staff. Many hospitals give their probationers a very wide and varied education in the duties which devolve upon those whose work is to tend the sick, but the management of mental disease cannot be taught. Thus it is evident that were it possible to carry out any such scheme as is here suggested benefit would be bestowed on patients, students, and nurses. Moreover, we venture to think that the advantages gained would extend even farther, for any system which assisted to break down the arbitrary distinction that at present exists between bodily and mental disease would do infinite good to the community. To know that mental diseases were treated in general hospitals would go far to instruct the public and would help to banish some of the superstitious ideas with which they are still surrounded. The problem is a complex one, but it must not be lightly cast aside, for its fulfilment would confer undoubted benefits if only the difficulties in the way could be overcome, and these do not appear to be insuperable.

[1] THE LANCET, July 8th, 1905, p. 112.

Annotations.

"Ne quid nimis."

THE LORD MAYOR'S LITTLE CRIPPLES' FUND.

OF all forms of philanthropic work none appeals more to the heart than those which seek to ameliorate the lot of suffering children, whether their suffering be from disease, from poverty, or from some blend of both. It seems certain, therefore, that the appeal which the Lord Mayor of London has issued on behalf of the crippled children of the London poor will meet with a generous response. Sir William Treloar has for many years taken a very deep and practical interest in the crippled children of the poor, a group of no less than 7000 little unfortunates, and he has determined to signalise his year of office by providing an institution where the objects of his benevolence, many of whom suffer from tuberculosis, can be treated medically and provided at the same time, where the conditions make it possible, with a training that shall fit them to become wage-earners. The scheme, for which the Lord Mayor desires to raise £60,000, provides for a home at the seaside where the period of residence will be prolonged beyond the time when educational authorities have control, and in cases where medical attention promises the possibility of cure every facility will be provided to this end. The Lord Mayor has pointed out publicly that his scheme will not displace a single existing charitable agency, neither will it compete with the hospital, the convalescent home, the holiday home, or the special school for any class of invalids, though it may necessarily partake of the character of each. In spite of the multiplicity of charities there is ample room for the new one, and we are confident that this well-directed endeavour to make life not only tolerable but bright and useful for hundreds of little ones now pining miserably, because hopelessly, away will commend itself to the medical profession. In a letter to the *Times* of Nov. 26th Mrs. Humphry Ward points out that the Cripple School at the Passmore Edwards Settlement started in 1899 was the first public school of the kind under the education authority, but it was preceded by two private efforts—viz., the school started by Mrs. Pilcher in Stepney and the classes for cripples in connexion with the Women's University Settlement at Stepney. There are now 22 schools for cripples in London and, to use Mrs. Ward's words, "if now by the Lord Mayor's most interesting scheme, carefully and wisely carried out, a crippled children's industrial training college for London, placed in the country or by the seaside, can be provided which shall be linked on the one hand with the special schools and on the other with the world of ordinary industrial employment, the efforts of those many persons who during the last eight or nine years have tried to secure for these physically weak but often intelligent and artistic children an education suited to their needs will indeed be happily crowned." A conference of the mayors and mayoresses of the metropolitan boroughs of London has been held at the Mansion House for the promotion of sympathy with the Lord Mayor's object and their Majesties the King and Queen have publicly expressed their approval of the scheme. The following donations, amongst others, have been received: Their Majesties the King and Queen, 100 guineas each; the Lord Mayor, £100; Mr. Alderman and Sheriff Crosby, £50; Mr. Sheriff Dunn, £50; "A Friend," £100; Mr. J. C. Eno, £105; Mr. C. P. Lavilly, £25; the London Exhibitions (Limited), £25; Mr. A. Dunkels, £50; Mr. H. F. Hepburn, £10 10*s.*; Mr. J. Barker, £20; Colonel Hanbury-Barclay, £10 10*s.*; Mr. William Woodward, £26 5*s.*; Major J. C. Harris, £10; and Dr. Jaeger's Sanitary System Company, £21.

THE DAY OF REST.

AN interesting commentary upon our last week's observations on the modern tendency of the Day of Rest to absorb Saturday has been furnished by a correspondent of the *Times*, who wrote from Kensington on Nov. 19th to complain that although his housemaid, having been discovered on a Saturday morning to be suffering from scarlet fever, had been removed to the Western Fever Hospital by 11 A.M., no assistance in the matter of disinfection could be obtained from the public authorities until Monday. After exhausting every endeavour to have rooms disinfected and clothes and bedding removed, the complainant was able to obtain the assistance of a private firm at about 7 P.M. on Saturday, and will have to pay for a service to which he was entitled as a ratepayer. The correspondent states it to be a rule that no public health assistance is available for the inhabitants of Kensington from about 10 A.M. on Saturday to the same hour on Monday; and if this statement be well-founded he manifestly discloses conditions which might easily become sources of public danger and to which the attention of the municipality should be directed without delay. There can be no possible excuse for the abandonment of important public duties even on Sunday, and still less on Saturday. The late Sir Andrew Agnew, whose Bill for Securing (as it was accidentally printed) the *Bitter* Observance of the Sabbath excited a good deal of derision in the "thirties," had inserted in it clauses which permitted the performance of "works of necessity and mercy," and the Pharisees themselves did not hesitate to rescue the ox or the ass that had fallen into a pit. A Saturday holiday from urgently needed disinfection can have no other excuse than sheer idleness, and a sanitary authority which permits or connives at such idleness is manifestly unfit for the responsibilities which have been imposed upon it by the legislature.

MASSAGE BY THE BLIND.

ANY well-considered project for assisting those afflicted with blindness to earn their livelihood deserves hearty support. The number of remunerative occupations which are available for this purpose is extremely limited. The extraordinary acuity of the tactile sense which is attained by so many blind people might be expected to adapt them in a special manner for the practice of massage. In the case of highly sensitive patients the blindness of the masseur or masseuse may indeed be an additional recommendation. In 1900 an Institute for Massage by the Blind was founded in London, with Mr. Henry Power as chairman and with the coöperation of many distinguished ophthalmic surgeons. At the present time 40 fully qualified operators are at work under its auspices. Many of these have been very successful and are entirely self-supporting. It is, of course, an inviolable rule that masseuses connected with the institute shall treat only women and children and masseurs shall treat only men. It is noteworthy that massage has been practised by the blind from time immemorial in Japan; indeed, until recent years none but the blind were employed in this occupation. In 800 A.D. blind officers were appointed as attendants to the blind members of the royal family. At a later date many officers were appointed to look after the welfare of the blind. The chief officer, called "Sokengyo," was appointed in Kyoto, then the capital of Japan, whilst the others, named "Kengyo," were allotted a province each. A poor-rate was levied throughout the country for the blind. In 1870 the posts of officers and the poor-rate were abolished. This apparently cruel measure has proved a blessing in disguise and the blind have been encouraged to help themselves, much to their improvement as useful members of society. In Yokohama to-day, with a population of nearly

half a million, about 1000 men and women are engaged in massage, 400 belonging to a guild, 500 working on their own account, the remaining 100 being persons possessing sight. The success of the English institute has encouraged the authorities of the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases in Philadelphia to throw open their massage classes to blind students. The department is under the supervision of Dr. L. Webster Fox, Dr. S. Weir Mitchell, and other distinguished medical men. It forms the subject of an interesting paper by Dr. L. Webster Fox.[1] The conditions which obtain in England and America are essentially different from those in Japan. There massage has for many centuries been regarded as a monopoly of the blind; here it is an after-thought. Already there are far more masseurs and masseuses than can obtain regular work and the influx of a fresh supply from a new source must necessarily increase competition and diminish wages. Nevertheless, as has been pointed out, the blind possess special qualifications for the work, whilst they are debarred from occupations which are open to those of their rivals who are not similarly afflicted.

THE CHANGEABLE AND ABNORMALLY HIGH TEMPERATURE.

—	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
London	43·5	35·5	41·0	47·5	56·5	51·0	49·5
Oxford	42·5	36·0	42·0	46·5	55·5	54·0	48·5
Bath	42·5	38·0	45·0	48·0	56·5	55·0	50·0
Nottingham	41·0	35·0	39·0	48·0	54·0	53·0	48·0
Leith	38·5	39·5	43·0	49·0	50·0	58·0	55·5
Aberdeen	38·0	37·0	38·5	41·5	45·0	56·0	53·5
Nairn	33·5	37·5	40·0	41·5	45·0	58·0	54·0
Birr (central Ireland) ...	35·0	37·5	39·5	45·0	53·5	56·5	51·0

The above figures represent the mean temperature at certain selected places in the United Kingdom for the week Nov. 18th-24th, as deduced from the maximum and minimum readings of the screened thermometers. Although the localities chosen for the purpose are only eight a similar result would be given if the figures were obtained from stations ten times as numerous. Changeable as is the climate of this country it is only very occasionally that such an extraordinary range between the mean daily temperature occurs within the space of a single week and still more rare that such abnormally warm weather is experienced at such an advanced period of the year. In Scotland and central Ireland on Sunday the mean temperature was about two degrees lower than the average for the middle of January—the coldest part of the year—while on the following day the mean temperature in London and the inland parts of England generally was as much as three degrees below the January average. But so great was the change that by Thursday the mean in London and at Bath and Oxford was equal to that at the beginning of June. The increase of warmth was still more striking in Scotland; on Friday the mean temperature at Nairn was rather higher than the average for the middle of July—the hottest period of the summer in that locality; and at Leith and Aberdeen the unseasonable warmth was as great as is usually experienced during the middle of August. In central Ireland, where the variation in warmth is more sudden and extensive than is generally known, the mean on Friday was equal to the average of mid-June. The highest shade temperatures recorded were 61° in London and many other places and 62° in many parts of Scotland. The cause of the exceptional warmth is not very difficult to discover when the daily weather charts of the Meteorological Office are studied. It appears that owing to the existence of an anticyclone over the central countries of Europe, which extended its western borders towards the south-east of this country, and to the presence at the same time of large cyclonic systems on the Atlantic not a great distance from our west and north-west coasts, a current of air from the southern waters of the ocean was drawn over this country at a rate varying from between 20 and 40 miles per hour at the surface of the ocean and probably at an accelerated rate some distance above it. The heat was thus imported and the air from the vast expanse of sea was, as proved by the hygrometers, charged almost to saturation with moisture. It may indeed be safely assumed that any unusually warm spell of weather during winter or late autumn always arises from a similar cause, while a hot spell in summer, instead of arriving from the Atlantic or America, is mostly generated over this country itself by the action of the fierce sun on the receptive earth.

[1] Ophthalmology, October, 1906.

SCARLET FEVER MORTALITY AND HOSPITAL ISOLATION.

THE influence of hospital isolation on the proportional prevalence and fatality of the principal epidemic diseases has been frequently discussed and is still one of the most interesting problems of public health organisation. The decline in the rate of mortality from scarlet fever in England and Wales in recent years, concurrently with the increase of hospital accommodation for isolation of the disease, is specially noteworthy. During the ten years 1861-70 the annual rate of mortality from this disease in England and Wales was equal to 971 per 1,000,000 of the mean population at all ages. In the three following decennial periods, 1871-80, 1881-90, and 1891-1900, the annual death rate from scarlet fever declined successively to 719, 338, and 158 per 1,000,000; and in the first five years of the current decennium (1901-05) the rate further fell to 126 per 1,000,000. Thus during the past five years there has been in England and Wales, in equal numbers living, scarcely more than one annual death from scarlet fever to eight that occurred during the ten years 1861-70. In London, where the increase of isolation hospital accommodation in recent years, provided by the Metropolitan Asylums Board, has been so conspicuous, the decline in the rate of mortality from scarlet fever has been still more remarkable than in the whole of England and Wales. The annual death rate from scarlet fever in London was equal to 1133 per 1,000,000 during the ten years 1861-70, and successively declined to 600, 335, and 188 per 1,000,000 in the three following decennia—1871-80, 1881-90, and 1891-1900; and during the last five years 1900-05 the annual death-rate from this disease in the metropolis further fell to 105 per 1,000,000, scarcely more than an eleventh of the mean rate that prevailed during the ten years 1861-70. The normal accommodation provided by the Metropolitan Asylums Board for fever patients at the end of last year amounted to 5981 beds, and at that date further accommodation for 1288 beds was in course of provision. As regards cases of scarlet fever in these hospitals, the percentage of admissions to compulsory notifications of the disease has more than doubled during the last 16 years—namely, from 42·8 in 1890 to 88·6 in 1905. It is, moreover, a fact that the London death-rate from scarlet fever has declined by more than a half during these 16 years; the mean annual death-rate was 242 per 1,000,000 in 1890-94, and as above stated fell to 105 in the last five years 1901-05. While it is impossible to attribute the whole of the recent decline in the fatality of scarlet fever in England and Wales to the increase of systematic isolation of cases of the disease, it is also

impossible to ignore the beneficial effect of this important factor in public health administration, having special regard to the exceptional decline in London where hospital isolation has been so successfully developed under the Metropolitan Asylums Board. No fewer than 16,958 cases of scarlet fever were admitted to the hospitals of that Board during last year, considerably exceeding the number in any previous year since the Board commenced its operations in 1871; the nearest approach to so high a number occurred in 1896, when 15,982 cases were admitted. It is true that a constantly increasing proportion of this disease in London now receives hospital isolation, but the statistics quoted above seem to suggest that while the type of the disease has in recent years assumed a milder form, its prevalence does not appear to have declined notably. This theory of a milder type of disease is somewhat supported by the marked decline in the case-mortality of the patients treated in the Asylums Board hospitals, after due allowance for the larger proportion of the total cases of the disease now treated therein. The case-mortality among scarlet fever patients treated in those hospitals averaged 12·6 per cent. during the ten years 1874–83, whereas the mean percentage in the last ten years has not exceeded 3·5; the decline of case-mortality, indeed, has been almost steadily maintained during the whole period. As indicating, however, a possible decline in the prevalence as well as of the fatality of this disease in London, it should be pointed out that while the annual number of notified cases averaged 22,177 during the eight years 1890–97, the average annual number during the more recent eight years 1898–1905 had declined to 16,356. On the whole there seems little ground for doubting that hospital isolation has been one of the most influential factors in the recent remarkable decline in the fatality of scarlet fever, at any rate in London.

A DANGER OF ELECTRIC SUSPENSION LAMPS.

THE wires, or as they are technically termed "the leads," of a suspension electric lamp are frequently made to serve two purposes—namely, to carry the current to the lamp and to suspend it from the ceiling. As a rule all goes well so long as the insulating material covering the wires is intact. But this material, especially in certain atmospheres, tends to rot or to wear out. By the continual kinking also of the wire, as by doubling it or looping it up in order to reduce the distance of the lamp from the ceiling, a similar effect may easily be produced. The two naked wires may thus become in dangerous proximity to each other and occasionally contact results, and therefore short circuiting, and the wires for some length are destroyed. The support of the lamp is thus suddenly withdrawn and it falls to the ground. If a person happens to be immediately underneath the lamp at the moment he may receive severe injury. The results might easily be serious—as, for example, when the lamp is inclosed in a weighty globe or is fitted with a heavy shade. The vacuum bulb, as everybody knows, ends in quite a sharp point, and if this point with the weight of a heavy shade above it should happen to strike anybody's head a very serious injury might be inflicted. The event of an electric suspension lamp falling in this way is no figment of the imagination. We have seen such an occurrence on several occasions, though luckily without personal injury, simply because no one happened to be under the lamp at the time of the accident. Apart from such an undesirable result the fall of the lamp is preceded by a sharp terrifying flash, then the lamp comes to the ground with a crash, the bulb itself "imploding," and the result is an unpleasant shock to most persons All this could, of course, be avoided by setting apart the wires for one function—that is, of conveying the current. They should not be trusted as a means of support for the lamp. It would surely be quite a simple matter to provide cords or special wires not connected with the current and used exclusively for suspending the lamp from the ceiling.

BRONCHO-ŒSOPHAGEAL FISTULA DUE TO AORTIC ANEURYSM.

IN the *University of Pennsylvania Medical Bulletin* for October Dr. A. O. J. Kelly and Dr. R. S. Lavenson have reported the following case. A woman, aged 37 years, was admitted into hospital on Nov. 13th, 1905. About two and a half months previously she began to suffer from pain in the right chest which became worse on exertion. About six weeks before admission a pulsating lump was noticed on her chest. There were also dyspnœa, palpitation, cough, and huskiness. The apex beat was visible in the fifth interspace almost in the anterior axillary line. To the right of the sternum from the first to the third interspace was a globular pulsating tumour about one and a half centimetres high. It showed expansile pulsation, systolic and diastolic thrill, and diastolic shock, and a double murmur was heard over it. At the cardiac apex was a blowing systolic murmur. The pulse was less marked in the right carotid and radial arteries than in the left. The left pupil was larger than the right. On the left side the respiratory murmur was very faint and expansion was defective. There was impaired resonance from the third to the seventh ribs in both interscapular spaces. The patient was comfortable only when propped up and leaning forward. On the 23rd she complained of a lump rising in her throat when she tried to swallow. On the 24th the dysphagia had increased and solid food could not be swallowed. There was pain in the back, the præcordium, and over the aneurysm. On the 25th the bulging had subsided almost to the level of the chest but posteriorly the right side was prominent and the interscapular space was dull from the third to the eighth rib. Over the dull area breath sounds and vocal fremitus were absent. The patient rapidly lost strength and weight. On Dec. 9th expansile pulsation was no longer visible to the right of the sternum and the murmurs were less loud. The dysphagia and cough increased and there was considerable expectoration of thick lumps of mucus. On the 11th swallowing produced such severe paroxysms of coughing that it was necessary to resort to rectal feeding. At times the respiration was harsh and noisy as if the bronchi were compressed. On the 15th the patient was cyanosed and loud bronchial râles could be heard at a distance of some feet from the bed. She could no longer swallow and complained of pain over the whole chest. She suddenly became extremely cyanosed and fell back dead. The necropsy showed an aneurysm arising from the junction of the ascending and transverse portions of the aortic arch and adherent to the sternum at the junction of the second costal cartilage. It contained greyish-red laminated clot which projected into the left ventricle and was attached to the musculi pectinati. On the posterior wall of the ascending arch was a second aneurysm which extended posteriorly and compressed the trachea at the level of the bifurcation. The tracheal rings were broken down and the pressure on the posterior wall had produced necrosis with a resulting fistula between the left bronchus and œsophagus. The perforation was half a centimetre in diameter and its edges were necrotic and foul-smelling. Above the level of the fistula the trachea was filled with a milky substance presenting the characters of liquid food. The mucous membrane of the trachea was intensely congested. The bronchi were partially filled with a similar fluid to that contained in the trachea. Throughout the lungs were areas of consolidation which were confluent in the right lower lobe. Dr. Kelly and Dr. Lavenson explain the subsidence of the tumour in the

chest as follows. The wall of the posterior aneurysm became weaker, permitting its enlargement and causing pressure on the trachea and œsophagus. As this was the nearer aneurysm to the left ventricle it received the force of the ventricular systole and permitted the subsidence of the anterior aneurysm. Only one other case of broncho-œsophageal fistula due to aneurysm appears to have been recorded. Habershon reported[1] the case of a man, aged 23 years, suffering from traumatic aneurysm of the arch of the aorta which proved fatal by perforation into the pericardium. For a week preceding death there was considerable dysphagia. At the necropsy a fistula was found in exactly the same position as in the case now recorded.

THE CORRASSA COMPOUND.

NEARLY ten years ago, or, to be exact, in THE LANCET of Dec. 19th, 1896, in an annotation headed "An Infamous Quack," we commented upon some abominable documents sent out by a person calling himself at that time the Rev. David Jones who vended a nostrum known as the Corrassa compound. We concluded our annotation by commending Mr. Jones "to the notice of the police as a man who is attempting to obtain money under false pretences." At length the law (*Pede pœna claudo*) has overtaken Jones, whose real name appears to be Hawkins, and his son, for they were committed on Sept. 30th by the Brighton magistrates for trial at the assizes on a charge of conspiracy to obtain money by fraudulent representations. On Nov. 26th the elder Hawkins, who had pleaded guilty, was sentenced to three months' hard labour. The younger prisoner was discharged, no evidence being offered against him. Mr. Justice Lawrence in passing sentence is reported as saying that the case might be regarded as a test case. He hoped, however, that the punishment which he inflicted would not be taken as an indication of what was necessary in such cases. The false pretences were two: firstly, prisoner represented that the powders were remedies for certain disorders; and secondly, he pretended that two persons, whom he described as clergymen, had been to some part of Africa and had learned the secret of this remedy. (See a detailed account on p. 1565.) He wished the Crown success in undertaking prosecutions of this kind, as it was most desirable in the public interest that such frauds should be brought to light and put a stop to. These are admirable words: we hope before long that the Public Prosecutor will turn his attention to some of the other disgraceful quacks who fill their pockets and those of the proprietors of sundry magazines and papers by trading on the credulities of weak-minded persons. A glance at the advertisement pages of any popular monthly magazine will give him plenty of material.

A SIMPLE CONTRIVANCE FOR THE TREATMENT OF HAY FEVER.

IN the *Journal of the American Medical Association* of Oct. 20th Dr. A. C. Heath has reported some ingenious experiments performed during the hay fever season of 1905 to prove that the atmosphere was laden with some irritating substance which could be removed by filtration. He used an ordinary water-bottle of the chemical laboratory fitted with two glass tubes to one of which was attached rubber tubing. The bottle was half filled with water and when suction was made through the rubber tubing the air inhaled passed through the water. The apparatus worked on the principle of the Turkish pipe. By this means it was hoped that any material suspended in the air would be removed in its passage through the water. In the experiments the subjects inspired through the nose, which was connected with the apparatus, and expired through the mouth. Two persons who were so sensitive to golden rod that they suffered from paroxysms of sneezing when near it inspired air taken from the midst of a bunch of golden rod. In a few minutes after breathing the filtered air they became comfortable and the irritation ceased. Dr. Heath then made an appliance consisting of two rings to fit the nostrils connected by a bridge. Over the rings he stretched fine "grass linen" or silk chiffon. To get the best results a fine mesh (at least 100 to the inch) was necessary. The rings were placed in the nostrils at a distance of about half an inch from the orifice, so that all inspired air had to pass through the fine netting covering them. They did not interfere with respiration and were worn comfortably. One man wore them continuously for 24 hours, at business and during sleep. The rings were used in a number of severe cases of hay fever and in every one relief was apparent in from 15 minutes to an hour. Sometimes the appliance was difficult to use if the nose was previously so blocked that the patient could not breathe through it. But if he persevered nasal respiration became established and the irritation passed away rapidly. In most of the cases Dr. Heath had previously tried various recent remedies for hay fever with little success. Some of the patients had obtained considerable relief at night by putting a wet handkerchief over their faces and trying to breathe through this. This fact suggested to Dr. Heath the appliance now described. He usually made the rings of German silver, sometimes of cork and hard rubber. It is not necessary that the two rings should be connected by a bridge but this facilitates their introduction and removal. The bridge passes across the septum at its junction with the upper lip and is hardly noticeable. The filtering fabric is put on in the same way as linen is put on embroidery hoops by women and can be changed whenever desired. It soon becomes moist, but this increases its filtering power.

[1] Guy's Hospital Reports, 1856, vol. ii., p. 250.

THE INTERNATIONAL SOCIETY FOR THE PREVENTION OF TUBERCULOSIS.

AT the meeting of the Société Internationale de la Tuberculose held on Nov. 6th in Paris, under the presidency of Professor Lancereaux, the subject of the compulsory notification of tuberculosis was under discussion. A paper was read by Dr. Samuel Bernheim and Dr. Louis Dieupart, who referred to the conclusions of the recent international conference on tuberculosis (at the Hague in October of this year), and also to the report of the committee of the Academy of Medicine (June, 1906). These observers maintained that the prophylaxis of tuberculosis could not be made real and efficacious unless the compulsory notification of the disease was legally enforced. They further expressed their conviction that with such a formidable enemy no half measures would avail; they considered that compulsory notification of tuberculosis could be made without any shock to humanity and pointed out that certain countries had adopted this system and found the advantage of it. It is, of course, understood that compulsory notification involves, *ipso facto*, compulsory disinfection. We have on previous occasions drawn attention to the arguments which have been advanced in favour of, and against, compulsory and voluntary notification of tuberculosis, and in a leading article in THE LANCET of August 11th, 1906, p. 380, we laid stress on the importance of distinguishing between cases of "open" and "closed" tuberculosis when considering the advisability of notifying the disease. As we have indicated, Dr. Bernheim and Dr. Dieupart are firmly impressed with the necessity of resorting to the strict *régime* of compulsory notification; we note with satisfaction, however, that they suggest that during the lifetime of the patients notification should only apply to manifest tuberculosis in which tubercle

bacilli exist in the expectoration—that is to say, not to cases of "closed" tuberculosis. Instances of tuberculosis of the bones, of the glands, or of the skin are also exempted. We are of opinion that further trial of voluntary notification as now adopted in certain towns and boroughs is necessary before more stringent measures can be recommended.

ALCOHOL IN FRANCE.

THE French are always painting themselves more black than is necessary. Thus M. Georges Cahen, a recent writer in the well-known literary journal the *Revue Bleue*, prints statistics which, in his opinion, put France at the head of the alcohol-consuming nations. Paris, he says, has only 17,000 bakers and 14,500 butchers to keep it fed, but as many as 33,000 drink sellers. And if throughout France only 160,000 citizens are employed in the production of bread, no less than 500,000 are employed by the cabarets. In fact, if the figures be trustworthy, one-twentieth of the French electorate is in the pay of the tavern keepers. "Quelle nation," cries M. Cahen, "pourrait nous disputer plus riche floraison." But it should be borne in mind, as the writer proceeds to show, that the French "cabaret" is something more than a dram-shop. It is, in fact, a social and political rendezvous, where many enter only to drink in great moderation while hearing the latest news, reading the papers, or playing games. The "estaminets," in fact, are the miniature forums of the French democracy and not the hotbeds of national intemperance. Still it cannot be denied that the consumption of liquor per individual Frenchman is far greater than in the past. For whereas 50 years ago, as M. Cahen avers, the allowance of pure alcohol consumed by each individual in France during the course of a year amounted to 1·46 litres, or, very roughly speaking, about 2½ pints, the present consumption per head is more than thrice as much. Doubtless this is owing to the increase of beer and absinthe drinking. Yet it may be contended by believers in Gallic sobriety that this increase does not justify sensational writing which appears to be copied from English or American models.

HOSPITAL ABUSE.

ON Dec. 6th a conference of the United Hospitals of Great Britain and Ireland is to be held. The members of the conference will include representatives of hospitals in the United Kingdom, together with representatives of other bodies and persons specially concerned in hospital administration. The conference will meet at 2.30 P.M. in the Botanical Lecture Theatre, University College, Gower-street, London, W.C., and about 150 hospitals have already agreed to send representatives. The conference is the outcome of the deliberations of another conference held in March, 1905, of representatives of various hospitals to consider proposals which had been formulated by the hospitals committee of the British Medical Association. The proposals include suggested principles of hospital management as well as proposals dealing with cottage hospitals and nursing homes. The hospitals' proposals, broadly speaking, are practically the same as have appeared in our own columns from time to time, and deal with such questions as the suitability of patients for admission, the question of letters, the appointment of an almoner or inquiry officer, the inspection of all cases attending by a qualified medical man, the limitation of the work of the medical officers if possible, and the question of the coöperation of hospitals with public medical services and provident dispensaries. We earnestly hope that something definite will come of the deliberations of this conference, for the questions to be considered by it have been before the profession for at least the last 35 years. It is true that the Central Hospital Council deals with some of the problems, but what is really wanted is some definite organisation of medical men and of lay hospital authorities which can impress upon both the medical profession and the ordinary hospital subscriber that hospital abuse is bad for every person concerned, bad for the patients, bad for the medical men, bad for the progress of science, and bad for the charitable.

THE TREATMENT OF DYSENTERY BY CREASOTE ENEMAS.

ACCORDING to the *Semaine Médicale* of Sept. 26th (p. 462), Dr. G. Zanardini has treated with success 11 more or less serious cases of dysentery during the last two years by creasote enemas, prepared by adding one teaspoonful of a 10 per cent. solution of creasote to the yelk of an egg made into an emulsion with a litre of water. Creasote has also been used in the French army by Dr. A. Billet with excellent results, the enemas consisting of from a quarter to half a litre of a 1 or 2 per cent solution of creasote in almond oil, administered twice a day. In 16 out of 18 dysenteric cases treated in this way by Dr. Billet rapid improvement resulted; the griping pains ceased and blood disappeared from the stools which lost their fœtid odour. In the other two cases the patients were already in a very grave condition and although the intestinal symptoms improved under the treatment they eventually succumbed to suppurating hepatitis (*hépatite suppurée*).

A Reuter's telegram has been received from the expedition of the Liverpool School of Tropical Medicine which has been in Brazil since the commencement of 1905 with the object of making research into yellow fever. It states that the expedition has just been successful in proving that chimpanzees can be infected with yellow fever by means of the stegomyia mosquito—a discovery which may be of the highest significance. Both the medical men accompanying the expedition themselves contracted yellow fever in the earlier stages of their investigations.

THE department of public health, Queensland, in a bulletin dated Brisbane, Oct. 13th, states that for the week ending Oct. 13th there was no further development of plague at Cairns and that all the patients were then convalescent. A telegram from the Governor of the Mauritius, dated Nov. 23rd, states that for the week ending Nov. 22nd there were 37 cases of plague and 23 deaths from the disease.

THE Bradshaw lecture will be delivered before the Royal College of Surgeons of England, in the theatre of the College, by Mr. Edmund Owen, on Wednesday, Dec. 12th, at 5 P.M. Mr. Owen has selected as the subject of his lecture, the Treatment of Cancer by Modern Methods.

PRESENTATION TO A MEDICAL PRACTITIONER.—Dr. Charles Dundee, who has been for a quarter of a century connected with the Ballycarry and Islandmagee districts of county Antrim, where he is dispensary medical officer, was recently made a justice of the peace for the county of Antrim. His friends decided to do him honour and resolved to present him with a piece of plate. When Dr. Dundee was approached he at once decided against the presentation taking such a form and asked instead to be made a life governor of the Royal Victoria Hospital, in order that the neighbourhood might participate in the benefits accruing to the distinction which they were doing him. On Nov. 2nd, at a very large meeting, held in Mollooghdobb school house, Islandmagee, the formal presentation was made and, in addition, Dr. Dundee was presented with an illuminated address artistically arranged in book form. The proceedings at the meeting were very complimentary to Dr. Dundee and indicated clearly how much he is beloved and respected in his own district.

THE TRADE IN SECRET AND PROPRIETARY MEDICINES.

(SPECIALLY CONTRIBUTED BY A BARRISTER-AT-LAW.)

III.[1]

PRACTICAL PROSPECTS OF LEGISLATION.

IN the previous articles mention was made of the laws which affect the trade in secret remedies in Great Britain and in foreign countries. It has been seen that whereas many countries insist upon a more or less complete disclosure of the composition of all proprietary medicines, either publicly on the labels or privately to a Government department, in the United Kingdom absolute secrecy may be maintained. It has been seen also that in some countries the Customs department excludes or heavily taxes foreign proprietary medicines and the post-office refuses to carry certain classes of nostrum; that boards of health make arrangements for the publication of the results of analyses; and that the police exercise control over advertisements of secret remedies. In considering the practical possibility of securing in the United Kingdom some legislation or other means of control analogous to those which have been adopted abroad, it is necessary to take into account not only the attitude of the general public which purchases secret medicines but also that of those who are responsible for their distribution and sale. To the public, which considers that every symptom of disease and every manifestation of pain can be cured by appropriate physic, all advertised or recommended medicines stand broadly in the same class. When a member of the public finds an apparently respectable druggist recommending, and sometimes even a medical practitioner prescribing, one proprietary medicine, he fails to see any reason why another proprietary medicine should come under the ban of condemnation. The public trust in secret medicines is partly due to the plausible, almost convincing, language used in advertisements, but also partly to the fact that there has never been a general, consistent, and definite effort on the part of medical men and pharmacists—much less on the part of the general press—to show that acetanilide is a dangerous drug to take, or that phenacetin will only in certain cases relieve the pain of a headache, or that soothing powders are often a menace to a baby's health, and even to his life. At the same time there are many who, in spite of their boundless faith, have tried to cure their diseases by means of secret medicines and have been disappointed; and by these the meaning of the word "quackery" tends to be appreciated more widely. It may be regarded as probable that no reasonably conceived legislative proposals to deal with the secret medicine traffic would meet with strenuous opposition from the general public, once it were generally understood that nothing would "cost more" to buy. But the classes whose attitude is now to be considered would take a keen interest in any legislative proposals, would bring much influence to bear on legislators, and might even adopt the terrorising tactics which have proved so successful in New Zealand and the United States.

The opposition of the manufacturers to any proposal whatever for making a disclosure of composition necessary is a foregone conclusion. And it is easily understood. Not only is the element of secrecy or mystery itself a valuable asset as an attraction to a public which delights to be mystified, but it is obvious that once the composition of a remedy were made generally known there would be nothing to prevent retail druggists from making and selling an identical preparation. Moreover, it could be conclusively proved, even to the general public, that the substitute was in fact just as good as the advertised article for which it would be offered. It was stated in the concluding portion of the article on this subject in THE LANCET of Nov. 24th that new regulations requiring disclosure of the composition of proprietary medicines have recently been made in Australasia and are contemplated in New Zealand. It is instructive to note that while THE LANCET was actually being printed on Thursday, Nov. 22nd, the regulations in question were being discussed at an influential meeting of proprietary medicine manufacturers which had been convened by the Chemical section of the London Chamber of Commerce. Those present at the meeting unanimously resolved to send a deputation to the Colonial Secretary in order to protest against any compulsion to disclose trade secrets, "as such disclosures would annihilate their property, making the trade names of their articles *publici juris*." Several speakers, representing firms which do an enormous business, stated definitely that they would stop advertising in the newspapers of Australasia and New Zealand if the regulations were adhered to. They affirmed that the maintenance of absolute secrecy was vital to their business interests and a proposal that the disclosure of the composition of proprietary medicines might be confidentially made to a Government Department found no favour at all. The attitude of the manufacturing class is thus uncompromisingly clear.

The attitude of the retail distributors towards the problem demands a little discussion. Retailers may for this purpose be divided into two classes: (1) the conscientious "professional" pharmacist or chemist and druggist, and (2) the merely trading druggist, the small drug-stores, grocers, and herbalists. Of these, members of the first class do not stock a proprietary medicine which is of a notoriously fraudulent character; they do not "push" the sale of other persons' proprietary articles at all, though they will sell them on demand, preferring for ethical and commercial reasons to make and to sell proprietary medicines of their own. Members of the Pharmaceutical Society have for generations been consistently recommended by that body to practise their calling more or less on ethical lines. As educated and examined men, most pharmacists would feel a certain sense of shame in selling utterly fraudulent and worthless nostrums. They shrink from the idea of becoming merely mechanical distributors of packed medicines of which they do not know the composition—and on which their profit is extremely small. But as men of business who suffer severely from the keen competition of those limited companies which usurp their functions, they feel compelled to satisfy within limits the demand of the public for secret medicines. To appease his conscience without emptying his pocket the pharmacist usually resolves to put up his own proprietary articles. He takes care not to use any highly toxic drug which is likely to do serious harm, he is moderate (generally) in the employment of puffing language, and, so far as he can, he sells only those compounds of which he personally knows the composition. A few years ago the composition of these home-made preparations was generally a jealously guarded secret, but it is now usually discoverable by anyone who is willing to spend a little time over a search for the formula. To explain this a little history is necessary. Three years ago it was decided by the Board of Inland Revenue, as the result of a High Court decision, that medicine stamp duty should not be payable on a proprietary compound if made according to a published formula and if it bore on the label a distinct reference to that formula. At once the editor of a journal of pharmacy prepared and issued an enormous book containing some 10,000 formulæ, all with distinct numbers, but without any numerical arrangement and without a reference key. Most of the private proprietary medicines sold by pharmacists are now usually made from formulæ in this book, and their labels bear a reference number. But as the book costs 21*s.* and some hours' search may be necessary before a formula can be traced the secrecy is for all practical purposes maintained. Still, the pharmacist's conscience seems to be satisfied abundantly. Incidentally it may be remarked that while most of the 10,000 formulæ are for comparatively harmless compounds some contain considerable quantities of poisonous narcotics.

The writer has been given to understand that the pharmacist of the best type would in all probability not oppose legislation to compel the disclosure of the contents of all proprietary medicines and that he would certainly welcome anything calculated to increase the sale of genuine drugs and the dispensing of medical prescriptions, even if this were accompanied by a corresponding diminution of his own proprietary medicine trade. It is this class of druggist for which the council of the Pharmaceutical Society speaks. On the other hand, the second class of retail distributors—the "drug-store" keepers, grocers, "herbalists," and the like—make less pretence to lofty ethical standards. They want to sell as many articles as they can with the minimum of trouble for as much profit as possible. They are willing to exhibit show-cards and to distribute handbills advertising secret nostrums of nearly every type, especially if a definite minimum profit be fixed under the rules of the Proprietary Articles Trade Association. They are just as willing to sell

[1] Articles I. and II. were published in THE LANCET of Nov. 17th (p. 1390) and 24th (p. 1462), 1906, respectively.

an utterly fraudulent quack remedy as a compound such as Dinneford's fluid magnesia. In a legislative struggle they would throw in their lot with the manufacturers and would strenuously oppose any measure which would tend to place any portion of their trade under restrictions or regulations.

There are those who regard the press of Great Britain as thoroughly venal and who ascribe the scarcity of articles dealing with the growth of the secret medicine evil to the influence which the publishers of newspapers have over their editors. To a great extent, unfortunately, this undue influence does prevail. But there is another reason why editors hesitate to publish even statements as to the composition of a proprietary article. The possibilities of a libel action have also to be considered. Now, although a damaging statement is never a libel if it is literally true, yet a proprietor of a secret medicine is often quite eager to embark upon a libel action for the sake of the advertisement which he gets for his wares; and even if the newspaper's defence be sound the cost and trouble of defending an action are great. It is for these reasons a rare thing for an editor of a newspaper to permit himself to publish even a statement of the composition of a secret medicine. Any legislative proposal which would tend to restrict the supply of advertisements in newspapers would doubtless be strenuously opposed by the major portion of the press; and it is even probable that any proposal distasteful to the advertising manufacturers of proprietary medicines would be editorially fought by some newspapers, even if no question of suppressing or controlling advertisements were involved. If only because of the attitude which will be taken up by the newspapers, those persons who set their hand to the task of legislating must be prepared for a tax on their perseverance.

From this brief survey of other interested classes we may proceed to ask, What is the attitude of medical practitioners? It may be stated, without fear of contradiction, that the opinion of the profession is unanimously in favour of legislation to suppress the sale of articles of the type of liquozone and the like. Probably it was of such articles as these that the representative meeting of the British Medical Association was thinking when it decided a few weeks ago—

(*a*) That for medicines which are supplied otherwise than upon medical, dental, or veterinarian prescriptions no condition of sale short of the publication on each packet of medicine of the name and quantity of each of its constituents should be permitted.
(*b*) That the label should be made to constitute a warranty and that false description, whether on the label or in an advertisement, should be made an offence.
(*c*) That the provisions of the Food and Drugs Acts should be applied to proprietary medicines.

Recommendation (*a*) is a counsel of perfection—a phrase usually regarded as synonymous with practical impossibility. The synonym may or may not be applicable here but it may without hesitation be suggested that members of the medical profession should not repeat a mistake which has more than once been made with regard to medical legislation—the mistake of "biting off more than they can chew." The ingrained reluctance of the British Legislature to interfere with vested interests, in however vicious a business, is a frequent subject of remark among foreign students of European politics and in view of the experiences of Australasia and the other countries mentioned in the last article it is worth considering whether all the worst features of the proprietary medicine trade could be eliminated by less drastic measures which would arouse less powerful opposition. Of this more later. Recommendation (*b*) involves no great change in the law but only needs more strict interpretation and enforcement of the provisions of the Merchandise Marks Act than now obtain. Recommendation (*c*) may be dismissed with the remark that the provisions of the existing Sale of Food and Drugs Acts could only be applied to proprietary medicines when definite "prejudice to the purchaser" could be proved. The "nature, quality, and substance demanded" is a standard which is easily set up in the case of a non-proprietary drug. But who shall fix a chemical standard for bile beans?

The attitude of the administrative departments of the State is also worthy of study. The post-office does not hesitate to distribute lying circulars regarding quack medicines and even samples of the nostrums. The Customs officials have no power to keep out of the country worthless medicinal concoctions of foreign origin. The Director of Public Prosecutions has for years permitted any amount of conspiracy to obtain money from His Majesty's lieges by false pretences concerning the curative properties of secret medicines. When, a few weeks ago, a prosecution was set in motion by the Treasury against a man who, it was alleged, had for many years been engaged in this questionable trade, the news came as a great surprise to all who were familiar with the past attitude of the department. This prosecution has already done good and leads to the conclusion that although new legislation may be the only thorough remedy for all the existing evils which arise from the traffic in secret medicines, much could be done by a stricter enforcement of the provisions of the existing laws. The criminal charge of obtaining money by false pretences; the civil action for damages arising from the tort of "deceit"; the extension of the Schedule of Poisons to include acetanilide and similar articles; proceedings under the Merchandise Marks Act for the application of false trade descriptions,—these, if systematically and vigorously taken advantage of, would hit the vendors of the worst class of secret nostrums so hard as to make it quite impossible for them to carry on their trade. Then, too, medical practitioners and pharmaceutical chemists between them probably could do a great deal, if they would join hands in educating public opinion. If medical men would agree not to prescribe a proprietary article by name pharmacists would probably agree not to send out the medicine in such a way that its popular name could be known to the patient. At present, when a medical man orders a drug by a trade-mark name, the pharmacist may "dispense" the drug in the original package, sometimes without even removing the manufacturer's label. Both from the label and from the prescription itself the patient learns the name by which the medicine is commonly known, and when he has this knowledge he is often as wise as either the medical man or the druggist. In the interests of all concerned it would seem desirable that medical men should never order a drug of which they do not know the chemical nature and therapeutic action; and that pharmacists should never give a patient any hint of the nature of the medicine which has been prescribed. In Torquay, Bournemouth, and other health resorts the pharmacists, with the approval and help of the medical practitioners, have compiled small formularies containing recipes which enable medical men to prescribe with a comparatively small amount of trouble and yet to be absolutely independent of all advertised proprietary articles. In these formularies the proper chemical names of synthetic drugs are used instead of seductive trade-mark titles which spring so readily to the pen and to the tongue.

If new legislation is deemed necessary the regulation of secret medicine advertisements, and especially of the bogus testimonial evil, must certainly be attempted. Editors of medical papers should be protected against the quotation, without context, of a phrase, or of less than a phrase, occurring in a report, as if they had expressed actual approval of the compound. The late Sir Edwin Arnold once had the mortification of seeing one of his poems which he had sold, as he thought, to a publisher used to advertise a secret medicine. Further, it should be explicitly declared that the publication of a statement, *bonâ fide* believed to be true, concerning the composition or effects of a secret medicine, should not be ground for a libel or slander action. The trade-mark laws should be altered so as to prevent the acquisition of anything in the nature of a monopoly, in a single compound or a class of goods, merely because a semi-descriptive name has been cleverly invented. The amendment of the Merchandise Marks Act is desirable so as to make it the duty of local authorities to institute proceedings whenever any false description or recommendation in advertisements or on labels is applied to goods.

The possibilities which these, not very revolutionary, reforms present should be well considered before a definite decision is arrived at on the highly contentious subject of the compulsory publication of the exact composition of all medicines sold. It may be true that the whole reform is desirable. But for the present, in the absence of any State board of health, the practical possibility of persuading any Government to assist in securing the passage of so large a measure has not been shown to exist. To draft a fair and yet adequate Bill on the subject of secret and proprietary medicines would be far from an easy task, even if public opinion were keenly aroused. In order that public opinion may be aroused and that the legislature itself may be convinced of the urgent need for action, it may be considered desirable that the Government should be asked to appoint a Royal Commission with powers to analyse

and to report upon the proprietary medicines on the market and to investigate the subject in all its intricacy of detail. This is a matter for the consideration of the governing bodies of the medical and pharmaceutical professions and cannot usefully be undertaken by the present writer.

*** We have received from several manufacturers copies of an anonymous communication which has been addressed to them with reference to the previous articles of this series. It has been printed in imitation of typewriting and probably has been distributed broadcast. It runs as follows:—

> Have you seen the attack on Owners of Trade Marks and Proprietary Articles in the "Lancet" of November 17th, Pages 1390, 1391, 1392? Is this calculated to induce Advertisers to continue their Advertisements in this Journal?

We will answer this amiably intended question from our point of view. These articles constitute no attack whatever. They are legitimate criticism of an existing state of affairs with which some people may agree and in which others may see dangers. The persons likely to suffer from the publication of the articles are not those of our advertisers to whom these anonymous communications have been addressed—as they have perceived. Every journal which keeps a conception of its public duties before it has to recognise—at any rate in this country—that criticism honestly and carefully directed at all the various phases of contemporary life must sometimes fall upon individuals or classes whose advertisements actually help to swell the revenues of the journal. We invite our anonymous friend to come out of his shell (whence we could extract him in five minutes if we thought it worth while) and to indicate to the medical world what course he, as a proprietor or an editor, is taking, or is prepared to take, in respect of the advertisements of reputable firms. Would he suggest that all public policy must be shaped for him by his advertisers, and does he think that honourable manufacturers expect and desire this? We appeal to our critic's pocket as an inducement for him to take to the open. There are certain kinds of advertisers who would be glad to know where they can obtain not only publicity in the advertisement columns but nothing save praise from the editorial pen.—ED. L.

THE SANITATION AND HYGIENE OF RAILWAY CARRIAGES IN THE UNITED STATES AND IN GREAT BRITAIN.

THE question of the sanitation of railway carriages in the United States has been widely discussed during the past few years. In various medical journals and in some lay papers the charge has been brought that owing to the defective means of sanitation prevailing on almost all American railways not only are passengers put to great discomfort but diseases are spread. The fact must be remembered that the conditions of travel and consequently the construction of the railway carriages differ in many essential respects in the United States from the mode of travelling and build of passenger trains which prevail in Great Britain. In America it is no uncommon experience to pass several days in a train; indeed, the train is often a temporary home in which the traveller expects to find many of the conveniences of a hotel. Having lived in various parts of the United States for several years the writer has of course had much experience of railway travelling and can from personal knowledge testify to the lack of care generally displayed by railway companies for the health of their passengers. In the United States all trains are corridor trains but differ in construction from the corridor trains of Great Britain in that they are wider and that the aisle is in the middle instead of at the side of the carriage. Pulman and Wagner carriages, with sleeping berths and washing facilities, are provided on all long distance trains and on all trains lavatory accommodation is to be found. According to the critics of the sanitary arrangements at present existing on American passenger trains it is this last-named convenience—namely, what is known in America as the "open hopper"—which is the greatest source of danger. There are, without doubt, in the course of a year many patients suffering from typhoid fever who travel in railway trains. From the very nature of their disease such persons make use of the closet frequently and their excreta are dropped along the route and scattered in all directions, in some instances directly contaminating the water-supply of towns or villages by falling into a river or stream when the train is crossing a bridge. During the past few years numerous articles from leading authorities have appeared in medical journals in which the present system of closet accommodation on American railroads has been severely condemned as a fruitful source of danger. The corridor trains in Great Britain are provided with the same system, and although, of course, railway journeys here are far shorter and corridor trains are far less common than in the United States, on the other hand the country is much more densely populated. It is likely, too, that corridor trains will increase in number considerably in Great Britain in the near future, so that the need of providing more hygienic closet arrangements in railway trains quite comes within the sphere of practical politics.

Another insanitary factor in railway travelling is the universal presence of dust. In the United States the carriages are for the most part lavishly upholstered and embellished with ornamental gilded mouldings which afford excellent harbourage for dust and other kinds of dirt which invariably lodge in such situations in large quantities. The inhalation of coal dust is also a menace to the health of those travelling by train. In the United States most of the larger railways use hard coal which reduces the danger and discomfort to a minimum, but in Great Britain and on some American railroads soft coal is employed, the consequence being that coal dust is blown in at the windows and ventilators and lodges everywhere. Dusting and cleaning as usually practised on railroads are defective and inadequate. Indeed, some of the railway carriages in and about London look as if they were never cleaned. There is no doubt that in certain circumstances the railway carriage provides facilities for disseminating tuberculosis. This statement applies far more aptly to American trains than to English trains and in this relation the sleeping berth is perhaps the most important factor in the case. Many consumptive individuals, some even in an advanced stage of pulmonary tuberculosis, travel by train long distances in search of a warmer climate and health. Some railroad companies in America will not convey passengers who are obviously suffering from consumption, but there is a large class of tuberculous persons capable of spreading infection whose condition would not be recognised by ordinary observers. At any rate, many consumptives who are a possible source of danger to their fellow passengers travel long journeys by rail to California, Colorado, and elsewhere. Owing to the fact that the infection of tuberculosis may be conveyed not only by the dried sputum but by the minute particles of saliva which the sufferer ejects during a severe outburst of coughing or of sneezing the sleeping berth may be a means of infection. Sheets and pillow-slips may have been changed, but the blankets are in use for some time and may not have been properly disinfected; moreover, the component parts of the sleeping berth itself are shut up and closely sealed against fresh air and sunshine during the day. A sleeping berth, in the case of no thorough precautions having been taken to guard against infection, may be the means of conveying diseases other than consumption, and some of these, such as small-pox or scarlet fever, far more readily than consumption. The meagre supply of towels is another cause for complaint and to some extent a menace to the health of the American train-travelling public. In the winter time a most unpleasant and also unhealthy feature of passenger trains in the United States is the way in which they are invariably closed and over-heated. To this habit, both in houses, public buildings, and trains, may be attributed the catarrh with which the inhabitants of America are so often afflicted.

The action of the United States Public Health and Marine Hospital Service in making investigations during the past few years into the hygiene of railway passenger trains sufficiently demonstrates the fact that reforms are needed in this direction. In the last annual report issued by the Service the director of the Hygienic Laboratory announces that material advance has been made in the subject of railway passenger train sanitation, and particularly so far as sleeping berths are concerned. He is of opinion that it

is necessary to disinfect the railroad carriage, the sleeping car, the railroad station and the yard, even when no case of infectious or contagious disease has been known to have contaminated these places, seeing that such diseases may exist in latent or mild form so that they may be difficult to recognise.

In America reforms in the sanitation of railway passenger trains are more needed than in Great Britain, simply because railway journeys are longer, so that persons are not infrequently compelled to live in trains for a time. In such circumstances it is certainly essential that the washing accommodation and the sleeping berths should be as perfect as is possible from a hygienic point of view. The problem of the "open hopper" is a difficult one to solve successfully but until this be done careful measures of disinfection should be carried out in respect to the existing system.

MEDICINE AND THE LAW.

The Case of Mr. Robert Chisholm.

THE trial at the Old Bailey of Mr. Robert Fellowes Chisholm, who under the influence of "Christian Science" allowed his child to die from diphtheria without medical aid, has ended in his acquittal upon the charge of manslaughter. He was, however, convicted of the misdemeanour of neglecting his child in a manner likely to cause him unnecessary suffering or injury to his health, and for this neglect he was not sentenced to undergo any punishment but was bound over to come up for judgment when called upon. With the finding by the jury, and with the lenient view of the offence taken by the judge, many will acquiesce who take into account all the tragic circumstances of Mr. Chisholm's position, and who wish to make a large allowance for the fact that the neglect to procure medical aid for the patient was due to fanaticism and not to any indifference to his welfare. On the other hand, many will believe that a life may have been needlessly sacrificed and that a moderate punishment inflicted in a case of the kind referred to might have a deterrent effect upon other parents. They would urge that the law being the same for all, its effect should be so far as possible to give the sick child of the "Christian Scientist" or of the member of the sect of Peculiar People an equal chance of life with the child of parents whose religious tenets do not forbid compliance with the practices of modern civilisation. To this it might be added that even when due allowance is made for religious fanaticism the gulf should not be unnecessarily wide between the treatment accorded to the parent who adopts a new religion and that, for example, of the negligent and possibly drunken labourer, who, partly from ignorance and partly from brutality, breaks the same law and brings about the same tragic result. We may also suggest that although considerable leniency has been extended towards the Peculiar People the "Christian Scientist" seems to find even greater indulgence extended to him when he occupies a corresponding position, and it may be asked whether this is the result of a superior social position and of an affluence which places the resources of advocacy within his reach. Those who plead the cause of the children and desire that their sufferings and their lives should be considered rather than the prejudices of their fathers and mothers lay no claim as these do to work or to procure the working of miracles. They neither assert that in a particular case medical interference will certainly save life nor that in its absence certain death will ensue. They merely submit to the good sense of the community that the procuring of the best medical assistance obtainable in the circumstances is the duty, moral as well as legal, of the parent who does not wish to see his child undergo needless suffering or run the risk of premature death. Some day he must die, whatever religious belief his parent or he may hold. The particular case of Mr. Chisholm's child calls for some comment. A Christian Science "healer" or "practitioner" was called in who, having had some experience as a nurse before she was a "Christian Scientist," possessed that little knowledge which is proverbially dangerous and pronounced the case to be one of mumps. We note that Mr. Justice Grantham in his summing up said with regard to this point that "there was nothing to show that it was anything more than a very common infantile complaint which very likely might not require any treatment at all." We can hardly accede to this description of mumps, if it is to be taken to imply that a parent who thinks that his child has mumps is justified in neglecting to call in medical assistance. However, the poor little boy died, and it was left to the medical man, who then was hastily summoned, to see at a glance what the cause of death had been and to confirm his first impression by subsequent examination. Many people will be of opinion that the woman who called herself a healer or practitioner of "Christian Science," who had been partly trained as a nurse in a London hospital, and who started or acquiesced in the belief that the complaint was mumps, was at least as responsible as the father for the child's death, which, however, must really lie at the door of the founder of "Christian Science," Mrs. Eddy, and of all who have aided and abetted in the dissemination of her absurdities. Whether the mere prosecution and binding over of Mr. Chisholm will be sufficient to deter other parents who are members of the same fatuous sect time alone will show. There is another question, however, and, in our opinion, a still more important one, which arises out of the leniency extended by the law to the person who urges religious belief in extenuation of his offence in breaking it. If "Christian Scientists" and others are to receive nominal sentences for allowing their own children to die, are they also to be allowed to expose the children of others to the risk of serious illness or of death with impunity? At the recent trial it was proved that among the pupils at the school attended by Mr. Chisholm's son three other cases of diphtheria occurred at such an interval after his as to justify the opinion that they were traceable to it. What are we to say to this, as citizens in whose midst such a community as the "Christian Scientists" has established itself? There can be no doubt that so far as the law relating to the notification of infectious disease is concerned they are guilty of no offence. In order to render them punishable they must be "aware" of the nature of the illness, and this they are not likely to be as long as their religion forbids them to employ those who might enlighten their ignorance. The case of Mr. Chisholm's son and of the infection of two or three of his school-fellows is serious enough to call our attention to the matter, but it is trifling compared with what might occur on other occasions or in other circumstances. The keepers of dairies or of laundries, for example, should they embrace "Christian Science," may ignore infectious disease and its consequences with impunity so far as the criminal branch of the law is concerned, but with extremely serious results for their customers. The civil liability of a "Christian Scientist," so far as we are aware, has not yet been tested in the law courts. We would suggest, however, that, so far as damages can compensate the sufferer, the follower of Mrs. Eddy might be made to pay where his neglect to use ordinary care and precautions has caused his neighbours to undergo suffering and pecuniary loss.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Nov. 29th, 1828.

PER-CENTAGE SYSTEM.

To the Editor of THE LANCET.

SIR,—An invalid, suffering from the pernicious effects of adulterated drugs and ill-compounded medicines, for which the French pharmaciens are notorious, and feeling deeply for the interest and health of my fellow countrymen, I cannot forbear directing your and their attention, to a system of combination between certain British physicians and French pharmaciens in Paris, which is now carried to such a scandalous and mischievous pitch, that it has drawn upon the offenders the ironical animadversion of the *Parisian Press*.

The following is copied from *The Corsaire:* "A medical paper called the *Hygie*, recently gave a letter from the pharmacien Beral, Rue de la Paix, to Dr. Ch-s-de, who had just arrived from London, for the purpose of initiating him into certain customs which he calls French and which consist of the pharmacien engaging the doctor to send all his prescriptions to him; the pharmacien consenting to pay the

officious doctor a reasonable sum. All this may be true, but it is long since the English physicians, Morg.-Tup, and Mac-g-lin, bargained with the pharmacien Beral; and the *Hygie* is wrong in saying, that these lucrative arrangements began with the French, for everybody knows, that in *commercial affairs, the English always* take the lead."

An English Journal, published in Paris, contains the following:—"The English nobility and gentry are most respectfully informed, that a Pharmacy will shortly be opened, quite in the English manner; physicians supporting this establishment, will receive as liberal a *per centage* as at any other Pharmacy."

"N.B. Each prescription will be numbered, and the doctors paid at the end of every month."

"'Tis true, 'tis pity;
And pity 'tis 'tis true."

I am, dear Sir,
Your obedient servant,
AN ENEMY TO THE PER CENTAGE SYSTEM.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

An Inquiry into the Sanitary Circumstances and Administration of the Urban District of Darlaston, by Dr. R. A. FARRAR.[1]—This report gives some striking illustrations of the way in which a district may suffer as a result of past neglect to supervise the construction of new dwellings. The urban district of Darlaston in Staffordshire has a population of some 15,000. The population is almost wholly industrial, the principal industry being the manufacture of iron bolts and nuts. More than two-thirds of the workmen's houses are about 40 years old and Dr. Farrar describes them as belonging to "the worst era of jerry building." Practically all the older houses are built without a damp-proof course and consequently have damp walls; instances of absent or defective eaves spouting are to be seen in all parts of the district; in numerous instances rain comes through the roof owing to broken slates or defective ridge-tiles; in some cases there are no ridge tiles, the ridge slates being merely joined with mortar. Ill-fitting doors and window frames are everywhere to be found. The outer walls are sometimes only of half brick thickness and in one case could be perforated by a push with a walking stick. Dr. Farrar draws special attention to the attic bedrooms, many of which admitted rain freely and though often occupied and even overcrowded were, in his opinion, unfit for habitation. The back-yards and surroundings of most of the dwellings in the district are unpaved and allowed to remain in a very filthy condition. The type of midden privy in common use is more than usually objectionable. The contents of the privy instead of passing directly into the midden accumulate in a pit, the bottom of which is at a lower level than the midden floor. The result is that when these middens are cleansed the scavenger takes the ashes and dry refuse but only so much of the excreta as has overflowed from the pit. This arrangement seems to have found some favour with the local sanitary authority which tips the contents of ashpits on land where it is proposed presently to build. An arrangement which, on the one hand, facilitates building on polluted "made ground," and, on the other, involves leaving what is practically an open cesspool just below the seat of each privy, must be considered in the highest degree objectionable. The report draws attention to the high general, infantile, and zymotic death-rates of the district, attributable partly to insanitary and partly to social and industrial conditions. To attempt improvement in social conditions, including the notoriously excessive consumption of alcohol in the district, whilst the state of housing remains which Dr. Farrar describes, seems a hopeless task. The district council has done something recently to encourage the building of new artisans' dwellings of a satisfactory type and Dr. Farrar points out that as wages are good and employment is fairly constant the provision of such dwellings ought to prove a remunerative undertaking. Much good can also be done by systematic inspection of the various ramshackle properties and by notices to remedy structural and other defects. This is a matter which has been neglected in the past. One of the principal recommendations of the report is that a competent and well-qualified inspector should be appointed without delay in replacement of the present officer who is 79 years of age. Dr. Farrar draws attention to some instructive observations by Dr. S. Partridge, the medical officer of health, on the spread of enteric fever by the unnecessary visits of neighbours to patients suffering from that disease and also on the relation of the exceptional prevalence of infantile diarrhœa in Darlaston to the opportunities for dissemination of infective particles in the form of dust or by flies.

On the Sanitary Circumstances and Administration of the Windsor Rural District, by Dr. E. P. MANBY.[2]—The principal matter discussed in this report is the desirability of providing a main drainage system for the adjacent areas of Sunninghill, Sunningdale, and Ascot. Many of the dwellings in this part of the Windsor rural district are large houses standing in their own grounds, each of which makes its own arrangements for sewage disposal. The soil of most of the area in question consists of Bagshot sand which is not unsuitable for individual "conservancy" methods. But special difficulty has arisen in providing for sewage from various groups of smaller dwellings built in rows, with little or no garden ground about them. In these cases emptying of cesspools often occasions serious nuisance and there is considerable difficulty in properly disposing of the contents. The greater part of the Windsor rural district is supplied by the South-Western Suburban Company with Thames water which has undergone a more or less efficient filtration. In some instances, however, local wells are resorted to, the water of which appears to be exposed to the risk of contamination. The cost of a complete sewerage scheme for the Sunninghill and Sunningdale area would be considerable and it is reckoned that a rate of about 1*s.* 6*d.* in the £ would be required. On review, however, of the whole circumstances, and in particular having regard to the expense now entailed on householders in connexion with emptying cesspools and to the probable extension of building in the district, Dr. Manby concludes that a system of drainage "thoroughly efficient in the present and so planned as to be capable of future extension, for removing excretal and slop filth from the neighbourhood of houses aggregated together in Ascot, Sunninghill, and Sunningdale villages" should be regarded as a necessity and be established without delay.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH IN BRITISH DEPENDENCIES.

The City of Melbourne.—Dr. James Jamieson, the health officer of this city, gives the estimated population of Melbourne in the middle of 1905 at 68,940, the general death-rate on this basis having been only 12·5 per 1000. There has been a continued lowering in the death-rate for some years past and Dr. Jamieson naturally attributes at least some of such diminution to the improvement of the sanitary condition of the city. There has been since 1886-90 a marked and steady fall in the death-rate from enteric fever and it is stated that the only chance of any extensive epidemic of the malady at the present time is from some contamination of the public water-supply which is, on the whole, "well safeguarded, though an undoubted further improvement would be the introduction of some filtration method." There has been, too, as in so many other places, a steady decrease in the death-rate from pulmonary tuberculosis and Dr. Jamieson, while being quite in favour of certain special measures, points out that it is only about five or six years since the special measures taken under what has been called the "crusade against consumption" have been in operation and yet there was a distinct lowering of the mortality-rate more than ten years ago. Much of the good effect now apparent must, he thinks, be credited to such sanitary measures as improved drainage, better ventilation, and generally to the results of the legislation for the improvement of conditions in shops and factories. But, he adds, "I must claim a considerable share in that benefit as due to the steady work carried on by the council for the last 20 years in the inspection and condemnation of dwellings found to be unfit

[1] London, Wyman and Sons, Fetter-lane; Edinburgh, Oliver and Boyd; Dublin, E. Ponsonby. No. 243, price 4d.

[2] Ibid. No. 241, price 4d.

for occupation. Up to the end of 1905 no fewer than 2100 such condemnation orders issued necessitated thorough cleaning at least, very often the correction of structural defects, and especially dampness in walls and under floors, and often even evacuation or demolition." It must, too, be gratifying to the Melbourne health committee to have witnessed the marked decline in infantile mortality which has occurred recently, the average for the five years 1901–05 being only 109·3 per 1000 births as against a ratio of 151·7 for the preceding five-yearly periods. With reference to the control of foods the evidence of Mr. F. Dunn, the city analyst, is to the effect that there is a steady diminution in the adulteration of milk and the commoner articles of food, but it seems that there is a growing tendency to the employment of preservatives. We agree with Dr. Jamieson that the abuse of these preservatives should be put a stop to and we are glad to see that definite regulations are to be introduced when the Pure Foods Act comes into operation. We wish that we could hold out similar prospects with respect to the United Kingdom. Although the departmental committee on food preservatives was practically unanimous in its opinion on the matter we are still without any promise of a legislative measure which, to judge by the prevailing unanimity on the subject, would be entirely unopposed. The difficulties as regards milk control in Melbourne are no doubt accentuated by the high temperature which prevails there and in some samples of milk examined no fewer than 40,000,000 micro-organisms per cubic centimetre were detected. Apparently the by-laws in use in Melbourne contemplate sterilisation or possibly only pasteurisation of the milk, but we gather that such by-laws are not always applied. It should be added that the area of Melbourne has been recently extended and the population comprised within the extension will now amount to nearly 100,000.

The Board of Health of Guernsey.—Dr. H. D. Bishop, the medical officer of health of this island, reports that its population at the middle of 1905 was estimated at 42,220. During that year there was, he states, a considerable amount of emigration to Canada and South Africa, but a fair proportion of these emigrants seem to have returned to Guernsey after a short absence. As regards the race constitution of the population Dr. Bishop is unable to speak in precise terms, but he states that the wealthy and cultured foreigners are increasing in number and in landed property. There are, too, a large number of undesirable aliens who "as a class live in such conditions of overcrowding and insanitation that they constitute a source of great danger to both the bodily health and morals of the community in general." During 1905 the birth-rate was 27·1 and the death-rate 15·2 per 1000, while the infantile mortality was 135 per 1000 registered births. Dr. Bishop does not advocate either the voluntary or compulsory notification of pulmonary tuberculosis "as the long duration of the disease, often years, has to be considered, and the fact of notification would render it difficult for the sufferers from this disease who are already heavily handicapped by its exhausting effect to obtain work or lodging."

The City of Shanghai.—Dr. Arthur Stanley, the medical officer of health of this city, is able to open his current annual report with the statement that "the past year has been the healthiest on record." The foreign population in the autumn of 1905 was 11,497 and the native population 452,716. The death-rate among the foreign element was 11·2 per 1000 and among the native element 14·2, both rates being remarkably low. In the absence of any legal obligation to notify infectious disease a contract has been entered into between the municipal council and the qualified medical practitioners by means of which many cases of infectious disease are brought to the knowledge of the medical officer of health. During 1905 there were 50 cases of enteric fever notified among the population, but some of these were, Dr. Stanley states, so mild as to raise suspicion whether in point of fact they were not really cases of Malta fever. It appears that the examination of the blood of certain febrile cases of obscure nature both in Shanghai itself and up the river Yang-tse-Kiang has demonstrated the occurrence of Malta fever. With reference to oysters, which are an occasional cause of enteric fever in Shanghai, we are told it is probable that the oysters which are grown at Ningpo for the Shanghai market "are fed on human ordure"! It will be well for travellers to the East to note this fact. Dr. Stanley states that although scarlet fever has failed to establish itself in any part of Asia except Asia Minor, it appears to have taken up its abode permanently in Shanghai. Dengue has frequently spread from the Malay Archipelago along the coast ports as far as Shanghai, which it reaches about September, but the advent of the cold weather puts an end to its prevalence. The public health laboratory at Shanghai is doing good work, and, among other things, it is instrumental in distributing glycerinated vaccine lymph throughout the Far East, and in 1905 28,500 tubes were sent out from the laboratory. Mallein and tuberculin are also supplied. Two horses are kept for the production of diphtheria antitoxin, 500,000 units of which have been distributed. Similarly it is possible to obtain anti-rabic treatment at the laboratory, and since its inauguration in 1899 182 persons have undergone this treatment. There is a crematorium in Shanghai, and during 1905 13 cremations took place, the majority of those cremated being Japanese. The Shanghai Waterworks are, according to the monthly analyses, supplying a well-filtered water which yields on the whole very fair bacteriological results; and, as regards milk, the medical officer of health suggests the establishment of a municipal sterilising station to which the milk could be taken in bulk by the dairymen, tested, sterilised, bottled, and sealed before distribution. This course is, we imagine, recommended owing to the impracticability of procuring a pure fresh milk. The control of meat in Shanghai seems to be very much in advance of what has so far been found practicable in this country. There is a municipal slaughter-house and no meat is allowed to be sold from any shop or taken into the settlement unless it bears a municipal stamp showing the fact and date of slaughter in the slaughter-house.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8463 births and 4945 deaths were registered during the week ending Nov. 24th. The annual rate of mortality in these towns, which had slowly increased from 14·6 to 15·4 per 1000 in the five preceding weeks, further rose last week to 16·3. During the first eight weeks of the current quarter the death-rate in these towns averaged 15·4 per 1000; the rate during the same period in London did not exceed 14·6. The lowest death-rates in the 76 towns during the week under notice were 5·0 in King's Norton, 5·4 in Hornsey, 8·7 in Ipswich, and 8·9 in Burton-on-Trent; the rates in the other towns ranged upwards to 24·3 in Burnley, 24·8 in Norwich, 25·6 in Wigan, and 26·7 in South Shields. The 4945 deaths in the 76 towns showed a further increase of 278 upon the low numbers returned in recent weeks, and included 365 which were referred to the principal epidemic diseases, against numbers steadily declining from 2570 to 408 in the eleven preceding weeks; of these, 121 resulted from measles, 69 from diarrhœa, 65 from diphtheria, 42 from "fever" (principally enteric), 38 from whooping-cough, 30 from scarlet fever, and not one from small-pox. The deaths from these epidemic diseases were equal to a mean annual rate of 1·2 per 1000 in the 76 towns, and did not exceed 0·9 in London. No death from any of these epidemic diseases was recorded last week in Burnley, Swansea, Hornsey, or Newport (Mon.), or in nine other of the 76 towns; the annual death-rates therefrom, however, ranged upwards in the other 63 towns to 3·7 in Oldham, 4·5 in Warrington, 5·1 in Rotherham, and 10·8 in South Shields. The 121 fatal cases of measles showed a further increase upon recent weekly numbers; they caused the largest proportional excess in Bootle, Oldham, Rotherham, Warrington, and South Shields. The 69 deaths referred to diarrhœa showed a further considerable decline from the numbers returned in recent weeks. The 65 deaths from diphtheria showed a decline of 16 from the number returned in the previous week, but caused annual death-rates exceeding 1 per 1000 in Hull, Leyton, and South Shields. Of the 42 deaths referred to "fever," four occurred in Liverpool, four in Manchester, and three each in London, Birmingham, Leeds, and South Shields. Neither scarlet fever nor whooping-cough showed marked excess in any of the 76 towns. No case of small-pox was under treatment in the Metropolitan Asylum Hospitals during the week, no case of this disease having been admitted thereto since the end of June. The number of scarlet fever cases under treatment in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 4135 and 4150 in the two preceding weeks, had declined to 4144 at the end of the week

under notice; 467 new cases were admitted to these hospitals during the week, against 499, 417, and 462 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had increased from 150 to 288 in the four previous weeks, further rose last week to 312, but were 111 below the corrected average in the corresponding week of the four preceding years, 1902–05. The causes of 46, or 0·9 per cent., of the deaths registered during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Newcastle-on-Tyne, and in 53 other of the 76 towns; the proportion of uncertified deaths again showed a considerable proportional excess in Liverpool, Sunderland, Reading, Coventry, Blackburn, Huddersfield, and Middlesbrough.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 17·0 per 1000 in each of the two preceding weeks, rose to 19·1 in the week ending Nov. 24th, and exceeded by 3·1 the mean rate during the same week in the 76 English towns. The rates in the eight Scotch towns ranged from 11·8 and 15·1 in Perth and Greenock, to 19·6 in Leith and 21·0 in Edinburgh. The 653 deaths in the eight towns showed an increase of 71 upon the number returned in the previous week and included 69 which were referred to the principal epidemic diseases, being one fewer than were returned in the preceding week. These 69 deaths were equal to an annual rate of 2·0 per 1000, and exceeded by 0·8 the rate from the same diseases in the 76 English towns; they included 26 which were referred to diarrhœa, 13 to whooping-cough, 13 to measles, seven to "fever," six to diphtheria, four to scarlet fever, and not one to small-pox. The deaths referred to diarrhœa, which had been 16 and 24 in the two preceding weeks, further rose last week to 26, of which 15 were returned in Glasgow and three each in Edinburgh, Dundee, and Aberdeen. The 13 fatal cases of whooping-cough corresponded with the number in the previous week, and included seven in Glasgow and two both in Aberdeen and Greenock; the 13 deaths from measles showed a further increase upon recent weekly numbers, so many as 11 having occurred in Aberdeen. The seven deaths referred to "fever" included five in Glasgow, of which four were certified as the result of cerebro-spinal meningitis. Scarlet fever caused two deaths in Glasgow, and diphtheria two in Edinburgh. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 94, 100, and 123 in the three preceding weeks, further rose last week to 139, but were 16 below the number returned in the corresponding week of last year. The causes of 25, or 3·8 per cent., of the deaths registered during the week were not certified; the mean proportion of uncertified deaths in the 76 English towns during the same week did not exceed 0·9 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 27·4, 24·9, and 25·6 per 1000 in the three preceding weeks, further declined to 23·8 in the week ending Nov. 24th. During the first eight weeks of the current quarter the death-rate in the city averaged 24·3 per 1000, the mean rate during the same period being only 14·6 in London and 15·7 in Edinburgh. The 173 deaths of Dublin residents during the week under notice showed a further decline of 13 from recent weekly numbers, and included 19 which were referred to the principal epidemic diseases, against 12 and 14 in the two previous weeks; these 19 deaths were equal to an annual rate of 2·6 per 1000, against 0·9 and 1·2 respectively from the same diseases in London and Edinburgh. These 19 deaths in Dublin last week included nine from measles, six from diarrhœa, two from whooping-cough, one from "fever," one from diphtheria, and not one either from scarlet fever or small-pox. The nine fatal cases of measles corresponded with the number in the previous week, while the six deaths referred to diarrhœa exceeded the number returned in either of the two preceding weeks. Three inquest cases and three deaths from violence were registered; and 74, or 42·7 per cent., of the deaths occurred in public institutions. The causes of five, or 2·9 per cent., of the deaths registered during the week were not certified; the percentage of uncertified causes of death during the same week did not exceed 0·2 in London, while it was so high as 7·3 in Edinburgh.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: C. T. Baxter to the *Pembroke*, lent to recruiting headquarters, and G. S. Davidge, to the *Espiegle*, for R.N. College, Dartmouth.

The following qualified candidates for the Naval Medical Service have been appointed to be Surgeons in His Majesty's Fleet, viz.:—William Howitt Hastings, Sheldon Francis Dudley, James Leslie Burford, William Winsland Douglas Chilcott, John Courtenay Folliott Dudley Vaughan, William Forrest Archibald, and Cyril Verity Griffiths (dated Nov. 19th, 1906).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Edward Davis retires on retired pay (dated Nov. 24th, 1906). The undermentioned Captains to be Majors (dated Oct. 29th, 1906):—Douglas Lawson, Edwin B. Steel, Charles W. Profeit, Frederick Kiddle, Henry E. Staddon, and Samuel J. C. P. Perry.

CHANNEL ISLANDS MILITIA.

The Royal Militia of the Island of Jersey: Surgeon-Lieutenant-Colonel A. Dunlop, Principal Medical Officer, resigns his commission (dated Oct. 31st, 1906); Surgeon-Major W. Falla, from the 1st or West Battalion (Light Infantry), is appointed Principal Medical Officer, vice Surgeon-Lieutenant-Colonel A. Dunlop, resigned (dated Oct. 31st, 1906).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cinque Ports: Surgeon-Major J. W. T. Gilbert to be Surgeon-Lieutenant-Colonel (dated June 23rd, 1906).

Rifle: 9th Volunteer Battalion (Highlanders) the Royal Scots (Lothian Regiment): John Macaulay Bowie to be Surgeon-Lieutenant (dated Nov. 1st, 1906). 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Captain S. Lodge to be Surgeon-Major (dated Sept. 14th, 1906). 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Lieutenant A. Mackenzie to be Surgeon-Captain (dated Sept. 21st, 1906). 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: William Alfred Thomas Lloyd to be Surgeon-Lieutenant (dated Oct. 17th, 1906). 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon Lieutenant Colonel J. K. Anderson is borne as supernumerary whilst holding the appointment of Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Black Watch Volunteer Infantry Brigade (dated Nov. 9th, 1906). 3rd (The Buchan) Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant-Colonel A. Mitchell is borne as supernumerary whilst holding the appointment of Brigade-Surgeon Lieutenant-Colonel, Senior Medical Officer, Gordon Volunteer Infantry Brigade (dated Nov. 9th, 1906). 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant-Colonel D. W. Currie is borne as supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Argyll and Sutherland Volunteer Infantry Brigade (dated Nov. 9th, 1906.)

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Eastern Command: Maidstone Companies; Surgeon-Lieutenant Percy Charles Burgess, from the 1st Volunteer Battalion the Buffs (East Kent Regiment), to be Lieutenant (dated Oct. 31st, 1906).

ROYAL ARMY MEDICAL CORPS IN INDIA.

His Excellency the Commander-in-Chief has directed that the following rules as regards service in the Aden Brigade and Burma Division are to have effect from Oct. 1st, 1906:—

Aden Brigade.—The establishment for Aden—including the outpost of Dhthala in the Hinterland—will, until further notice, consist of six officers, viz., one lieutenant-colonel, one major, and four captains. Of the two field officers, one will invariably be present for duty. These officers are in future to be taken from the Northern and Western Commands in equal proportions and will be detailed by name from this division. Service in Aden will ordinarily be for one year and the officers for that Brigade will be selected from those about to enter on their fifth or last year of Indian service. Reliefs will, as a rule, be carried out twice during the trooping season—generally in November and March according to transport movements.

Unattached officers of the Indian Medical Service, should

there be any such, will be detailed from the Western Command and serve for one year.

Burma Division.—The establishment for Burma will, until further notice, consist of 18 executive officers—viz., two lieutenant-colonels, five majors, and 11 captains and lieutenants. These officers are in future to be taken from the Eastern Command and the 9th (Secunderabad) Division in the proportion of three-fifths from the former and two-fifths from the latter area. The General Officer Commanding, Burma Division, will notify direct to this Division the number of officers (by ranks) required for the annual relief. This intimation should reach Simla not later than July 31st in each year. On receipt of above the Principal Medical Officer of His Majesty's Forces in India will detail the officers by name for service in Burma. Officers who have completed two years' service in Burma will be eligible for hill stations in their respective Command or Division on return thereto. Extension of service for a period not exceeding one year may be granted by his Excellency the Commander-in-Chief if recommended by the local authorities. Unattached officers of the Indian Medical Service, should there be any such, will be detailed from the Eastern Command and Secunderabad Division, their term of service being two years.

In consequence of the foregoing changes the establishments of *personnel* in the Commands and independent Divisions affected will be revised as follows with effect from Oct. 1st, 1906, those of the Royal Army Medical Corps executive officer being: Northern Command, 88; Western Command, 90; Eastern Command, 88; Secunderabad Division, 40; and Burma Division, 18; total, 324.

With reference to foregoing orders the following reliefs will take place during the present trooping season:—*Aden Reliefs:* The undermentioned Royal Army Medical Corps officers, at present serving on the strength of the Northern and Western Commands, are directed to proceed to Aden for a tour of service, the services of these officers when travelling by Government transports being utilised. *From Northern Command:* Lieutenant-Colonel C. C. Reilly, by *Assaye* leaving Bombay Dec. 7th, 1906; Captain J. F. Whelan, by *Plassy* leaving Bombay March 6th, 1907; and Captain T. F. Ritchie, by *Assaye* leaving Bombay Dec. 7th, 1906. *From Western Command:* Major F. G. Falchnie, by *Plassy* leaving Bombay March 5th, 1907; Captain M J. Foulds, by *Plassy* leaving Bombay March 6th, 1907; and Captain A. J. Williamson, to disembark at Aden on his return from privilege leave from England Oct. 11th, 1906.

The following officers at present serving at Aden are directed to return to the Western Command to complete their tour of Indian service: Major R. C. Thacker and Lieutenant F. J. Turner. The undermentioned officers at present on sick leave from Aden in England will not rejoin the former station: Captain T. Biggam and Captain L. L. G. Thorpe.

Burma Reliefs: The following reliefs will take effect before Dec. 31st, 1906:—Major A. J. Luther (Eastern Command) to relieve Major D. Steill (Burma Division); Major G. A. T. Bray (Eastern Command) to relieve Major M. Boyle (Burma Division). On relief both Major Steill and Major Boyle will be posted to the Eastern Command.

The undermentioned officers will be relieved from duty in Burma before March 31st, 1907, and the names of their successors hereafter notified:—Major C. H. Hale, D.S.O., Captain R. C. Wilmot, Captain G. H. J. Brown, and Captain D. G. Carmichael

Extensions of service.—The following Royal Army Medical Corps officers are permitted to extend their present tour of service in Burma by one year, the date of termination of Burma tour being noted against their names respectively:—Lieutenant Colonel W. W. Pike, D.S.O. (Dec. 31st, 1907), Major H. W. K. Read (Feb. 21st, 1908), Captain A. J. W. Wells (March 14th, 1908), Captain C. V. Bagshaw (Dec. 29th, 1907), Captain W. W. Browne (March 14th, 1908), and Captain N. E. J. Harding (Dec. 29th, 1907).

KING EDWARD VII.'S HOSPITAL.

The Prince of Wales has appointed, and the King has approved of, the following additions to the honorary medical staff of King Edward VII.'s Hospital for Officers: Dr. John Anderson, C.I.E., Mr. Charles A. Ballance, M.V.O., Mr. Malcolm Morris, Mr. T. H. Openshaw, C.M.G., Mr. Charters J. Symonds, Dr. Herbert Tilley, and Mr. Cuthbert S. Wallace.

INDIAN MEDICAL SERVICE EXAMINATIONS.

An examination for not less than 18 commissions in the Indian Medical Service will be held in London on Tuesday, Jan. 29th, 1907, and the four following days. Further particulars and the necessary forms for application can be obtained from the Military Secretary, India Office, London, S.W.

Correspondence.

"Audi alteram partem."

A STUDY OF THE STREPTOCOCCI PATHOGENIC IN MAN.

To the Editors of THE LANCET.

SIRS,—Dr. F. W. Andrewes and Dr. T. J. Horder in an elaborate paper, published in THE LANCET of Sept. 15th, (p. 708), 22nd (p. 775), and 29th (p. 852), have entered upon one of the most difficult problems in bacteriology, a study of the streptococci pathogenic to man. The nature and complexity of their investigations are such that it is impossible for us to deal with the details and we cannot but admire the labour involved. Mindful, however, of your motto, "Audi alteram partem," and realising that they are dealing with diseases of very great importance, to some of which we have devoted much time and energy, we should feel greatly obliged if you would permit us to challenge some of their statements.

In the first place, with regard to malignant endocarditis. Their investigations, they remark, tend to show that malignant endocarditis has nothing to do with active rheumatism. Among their reasons they write: "In the majority of cases there has been a complete interval, generally of some years' duration, between the rheumatic phase and the phase of streptococcal infection." We should like to state that our investigations, published in the Transactions of the Royal Medical and Chirurgical Society, 1902, point to a class of case clinically, pathologically, histologically, and experimentally rheumatic. Our reasons were fully stated in that paper and our subsequent experience confirms our belief. Such cases may begin precisely like an ordinary rheumatic attack of severity or may follow directly upon such an attack, or as one would expect follow a year or more after a simple rheumatic attack. This last occurs in the majority of cases, because it is not the rule for an adult to suffer from severe rheumatic attacks of any nature at a much shorter interval than this, and it is adults who generally develop the malignant form. Further, such cases as these may show many of the evidences of malignancy and then eventually quiet down, a result nowadays often attributed to the use of some serum or even a vaccine, and yet one which may, as all physicians will admit, occur without such assistance.

Dr. Andrewes and Dr. Horder find that the salivary and fæcal types of streptococci are an important cause of malignant endocarditis, and they have further classified a diplococcus rheumaticus obtained indirectly from one of us as the streptococcus salivarius 2^e, "a very common fæcal type." Now, whatever they may term it, this is certain, that the micro-organism can produce both simple and malignant endocarditis as we have openly demonstrated on many occasions. It is also certain that it was obtained from rheumatic lesions and that the most frequent cause of simple endocarditis is rheumatism. If, then, this is a salivary micrococcus of a common fæcal type and the commonest causes of malignant endocarditis are on their own findings the salivary and fæcal types, why deny the association of rheumatism and malignant endocarditis?

No time-limit between an attack of rheumatism and the development of malignant endocarditis can disprove the probability of the malignancy being rheumatic, for there is every likelihood that the diplococcus once in the tissues may remain dormant but capable of evil for years. Their classification of the streptococci appears to us at present complicated and unsatisfactory, and we very much doubt that they are in a position as yet to deduce any opinion from their results as to the nature of rheumatism. Possibly these tests if used to expand Koch's postulates will have a sphere of usefulness. The name streptococcus salivarius 2^e is cumbersome and, in our opinion, not helpful. The term "diplococcus rheumaticus" is infinitely preferable, for it is founded upon Koch's postulates. Even in the last six years a good deal of light has been thrown upon experimental carditis, the relation of simple to malignant endocarditis, chorea, rheumatic, osteo- and rheumatoid arthritis.

The view that acute rheumatism is the result of an infection has been greatly strengthened and rheumatic processes have since the advent of the diplococcus rheumaticus been explained in a much more satisfactory way than ever before. The name streptococcus salivarius 2e might, on the other hand, possibly lead someone to think that the solution of the problem of rheumatism lay in the fermenting of a few carbohydrates in a laboratory.

The latest phase of the rheumatic problem among bacteriologists is to look upon the diplococcus as a terminal infection. Dr. Andrewes and Dr. Horder have advanced this idea again in their paper. That explanation is inadequate and was disproved in our first contribution.[1] In Case 6, for example, that of a young man suffering from a second attack of rheumatic fever, with pericarditis and endocarditis, the diplococcus was isolated from the blood during life. This patient recovered and some five weeks ago Dr. W. H. Wilcox, who was a house physician when this patient was admitted under Dr. D. B. Lees to St. Mary's Hospital, told us he had received a letter from the patient saying that he had never been out of work since. As this was more than six years after the illness we must, we think, alter our conception of terminal infections if we accept this as an example of its occurrence. Then, again, we have isolated it from the knee-joint of a patient who never looked like dying and made a good recovery, and from the blood of a young woman who succumbed weeks later from sudden heart failure, having recovered from acute pericarditis, the occasion of our cultures. A careful study of the tissues in experimental rheumatism also makes this view untenable.

In such cases as these the authors would perhaps fall back upon their alternative—that we had isolated a chance micro-organism of malignant endocarditis. Certainly we had, in that it was the diplococcus rheumaticus which may produce that condition, but none of these cases showed any conclusive evidence of malignant endocarditis and in the fatal case we can positively affirm that there was the usual simple rheumatic form, for we made the post-mortem examination ourselves. It is melancholy to come back again to another suggestion by the authors to the effect that acute rheumatism is not primarily streptococcal, but that certain of its manifestations—e.g., endocarditis—are. This is an old story and any merit there may be in our work consists in the laborious studies that we have been making for ten years in order to show—as we venture to think we have succeeded in showing—that all the cardinal lesions of rheumatism are identical if due allowance is made for the anatomy of the different organs. The diplococcus can be found in all. All can be reproduced. Take them away from rheumatism, what have we left? Take away the cardinal lesions from tuberculosis, what have we left? Not the disease, but the generally admitted constitutional tendencies that exist in both cases. We are disappointed at their failures with rheumatic pericarditis, but console ourselves that others have succeeded, notably Wassermann, Triboulet, Ainley Walker and Beatson, Beattie, and others on the continent.

One more statement we wish to dispute. Of the problem of rheumatic fever they write: "The problem is fully as complex as is that of scarlet fever and is apparently as far from final solution." On the contrary, we think the problem of rheumatism is less complex than that of scarlet fever and apparently nearer final solution, and for these reasons: 1. Scarlet fever is very contagious, rheumatism is not, and as we know nothing of experimental streptococcal contagion we have that additional difficulty to cope with in scarlet fever. 2. Rheumatism is strongly hereditary; scarlet fever is, we fancy, not. There is, then, good reason for believing that in rheumatism there is some tissue peculiarity which offers another path for investigation. In scarlet fever there appears no hope in that direction. 3. In rheumatism one micro-organism certainly can be isolated from all the cardinal lesions of the disease and is capable of reproducing them. Whereas, unless Chance of Chicago has succeeded, no one has reproduced the cardinal feature of scarlet fever—its contagiousness.

In conclusion, we would point out that those who attempt to establish a scientific fact take upon themselves a heavy burden, and such work is easily tarnished. For this reason we regret that a bacteriologist of the position and eminence of Dr. Andrewes should have permitted the sentence, "Another specimen from a case of chorea kindly sent us by Dr. Paine was unfortunately dead and could not be tested." We can affirm that this culture was living when it left our hands; of its later career we have no knowledge; but seeing that it was found dead it would have been easy either to have asked us for another or to have omitted any observation, or even to have substituted the more accurate "had died" for "was dead."

We are, Sirs, yours faithfully,

F. J. POYNTON,
ALEXANDER PAINE.

Nov. 19th, 1906.

[1] THE LANCET, Sept. 22nd, 1900, p. 861.

HOSPITAL DENTISTRY FOR CHILDREN.

To the Editors of THE LANCET.

SIRS,—The importance of good dentistry for children is recognised by all well-to-do parents. The children of the poor, whether their parents take enlightened views or no, are usually condemned by circumstances to all the drawbacks attending neglect of the teeth. May I state a few facts in your columns about an effort at the North-Eastern Hospital for Children to meet this situation?

Situated in the centre of one of the poorest and most densely populated quarters of London, surrounded by a wilderness of slums, where dirt, squalor, and starvation reign supreme, the North-Eastern Hospital for Children carries on a good work, the value of which it would be impossible to over-estimate. In 1905 the in-patients totalled 1609 and the out-patients 27,333, the total attendances being 75,637. These figures will give some idea of the task which the hospital has to cope with. The in-patient accommodation consists of 125 beds and rarely do they lack occupants. In 1897 the staff, recognising the tremendous amount of dental disease among the patients and the necessity of special provision for dealing with it adequately, resolved to enlarge the scope of the hospital by creating a separate dental department, and in order that the best results might be obtained appointed a salaried dental officer and equipped the department with all the instruments and appliances needed for the conservation as well as the extraction of teeth. This step, at the time, was quite a pioneer one as regards children's hospitals, and at the present date is still unequalled in its completeness. Since the department has been established plenty of patients have been found to keep the dental surgeon busy, his aid being frequently called for in cases of anæmia, malnutrition, gastro-intestinal disorders, or any others in which bad teeth might play a more or less important rôle, locally or remotely, the result being in many cases to hasten considerably the date of recovery. Cases where the removal of adenoid growth and enlarged tonsils is indicated are, prior to operation, referred to him to have the mouth put into as healthy and efficient a state as possible, by the removal of hopelessly carious and diseased teeth and the stopping of others. It is hardly necessary to multiply instances to show the value of a properly equipped dental department to a children's hospital; many other cases might be cited where the best results in treatment can only be obtained by the cooperation of the dental surgeon.

It has become common knowledge in the district that special provision is made at the hospital for treating children's teeth and many cases come solely for dental aid, the determining factor in most of them naturally being toothache. As may well be imagined, among patients living in such terribly unwholesome surroundings the teeth are frequently in a most deplorable state of neglected caries, the mouth being septic and evil smelling in the extreme. This, of course, necessitates a large number of extractions, principally of the temporary teeth, as the age of patients is limited to 12 years. In most cases, practically in all where the operation might reasonably be expected to cause pain, an anæsthetic is given. This besides being humane is also good policy, where subsequent treatment in the shape of stoppings has to be done, as it is then essential to gain the child's confidence at the first visit by not inflicting pain. As a dental anæsthetic for children ethyl chloride is unrivalled, and for the past two and a half years has been exclusively employed in the dental department. This period embraces about 1800 administrations for dental purposes only, no fatalities having occurred and very few cases giving rise to any anxiety. As there was no selection or previous preparation of cases, the patients always being treated at the first visit, this speaks volumes for the safety of the anæsthetic. The clothing is always loosened prior to administration. In most cases the period of anæsthesia is long

enough to do all the necessary extractions at one sitting, and this is an important gain as in many of the patients, as might be expected, the desire for dental treatment ceases with the loss of the aching tooth; hence the importance of doing all possible for them at the one visit. The knowledge that their children's bad teeth will be painlessly extracted, too, has a very calming influence on the minds of parents, who might, many of them, not otherwise be brought to listen to reason.

Not the least important point gained by hospital dentistry is the education of the public to a proper knowledge of the importance of the care of the teeth. The most careless parents cannot fail to notice the improvement in health consequent upon the removal of diseased teeth and the stopping of others. The child is able to masticate without pain and to sleep at night, when before, perhaps, it was a common occurrence for its own and its parents' rest to be continually broken. As a consequence, many of them become quite anxious to learn all they can about the preservation of their children's teeth, which is, of course, very gratifying to the dental surgeon. A leaflet giving simple instructions on the use of the tooth-brush and the golden rules of dental hygiene is freely distributed among patients.

I am, Sirs, yours faithfully,
SAMUEL F. ROSE, L.R.C.P. Lond., M.R.C.S., L.D.S. Eng.

Queen Anne-street, W., Nov. 19th, 1906.

THE ADMISSION OF WOMEN TO THE DIPLOMAS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—As the mover of the resolution at the recent annual meeting at the Royal College of Surgeons referred to by your correspondent Mr. F. G. Parsons, I should like to say that I share his regret that the question of the admission of women to the diplomas of the College should not be adequately discussed before a poll of the Fellows and Members is taken. I do not think that the meeting had any desire to burke discussion of the subject, but rather to secure that a real decision by the majority of the corporation should be taken. As is well known, the meetings as hitherto called by the Council are not statutory, and though they might discuss the subject could not decide it. I believe that under corporation law the Council would be absolutely bound to carry out the decision of a statutory meeting, which might be very poorly attended. My own conviction is that the majority of Fellows and Members retain an open mind on the question and are quite ready to listen to arguments from both sides.

I am, Sirs, yours faithfully,
Nov. 20th, 1906. W. G. DICKINSON.

LONGEVITY AND THE MEANS OF ATTAINING IT.

To the Editors of THE LANCET.

SIRS,—In the estimation of even the most sanguine among us there is no such thing as a reprieve from the sentence "thou hast lived," no blank cheque to be drawn after bankruptcy upon an imaginary bank of life—in short, no remedies labelled "elixir vitæ statim sumendum." The question is whether we can ever modify in any direction the rate at which we are being used up from the moment we begin to grow. Great individual differences in the rate of ageing become apparent during the middle decennia; and they remind us of the operation of forces as difficult to stem as the sea, yet like King Canute we are content to discuss the point, and we avail ourselves of our ignorance as clinicians to be hopeful still, to avoid pessimism to which there are no practical uses, and rather to lean the other way where illusions dwell which are beneficent. At any rate we are all agreed that vitality which can be lowered artificially even to the point of suppression may sometimes be raised from its depressions. In reality "prolongation of life" means nothing more than "a full and fair measure"; and to secure this two methods are available.

1. Concerning the "passive or defensive measures" by avoidance of disease and of other risks Sir Lauder Brunton in his eloquent address has much to say which we should lay to heart. 2. My own humble efforts have run parallel with those of Sir Hermann Weber in search of the "active, life-sharpening measures." Their practical details cannot be dealt with here; but a few brief remarks may be permitted on the general physiological and pathological question.

As to the physiology of longevity and the means of attaining it, it may perhaps be claimed that there are two essential and mutual forces at play, the moral factor and the physical, and that the success of any physical system of treatment is largely dependent upon the quality of the moral factor in its two aspects—a strong desire to live and a definite purpose in life. It cannot be doubted that longevity is favoured (1) by a keen love and enjoyment of life, "Lebenslust und Lebensfreude," and (2) by some adequate occupation, even if it be but a "hobby," which shall be engrossing, permanent, and progressive. But in addition, so long a study as that of the art of long life needs to be undertaken early and sustained to the finish. And in this connexion it has occurred to me that our most ancient prescription for longevity is difficult to surpass in its wide suggestiveness. "Honour thy father and thy mother" implies a prolongation of youth and of that "status pupillaris" which in our own profession is a permanent blessing. It suggests also under the implied devotion of filial service the early acquisition of a life-prolonging habit of labouring for others rather than for self.

Whilst we may safely moralise in terms of physiology, the pathology of the question admits of no dogmatising. We are mainly confined to opinions; and as such I have ventured to express the following views: (1) that the arterial degenerations, though exceedingly prevalent in the aged, are not a normal development but in the nature of a disease; and (2) that (apart from syphilis so largely responsible for arterial damage, and from other toxæmias, particularly the urinary) the disease is one of malnutrition and obstruction derived either from overwork of the arterial coats and possibly lesion of the intima, or, much more often, from over-rest and stagnation. This view may be wrong, but it gets support from the practical results of the application of a leading principle for the furtherance of longevity, the principle of keeping up a legitimate amount of physical and mental activity, combined with abundant rest: "otium cum labore."

Whilst the gradual necrosis of disuse is wasting the ancient frame and bending it almost into the egg shape from which it arose the waste material is being safely disposed of. The cannibalism of our phagocytes does away with the more tender parts whilst the tougher are sealed up in lime salts. Sir Lauder Brunton's view seems to be that the necrosis itself is to be attributed to previous vascular disease. I am rather inclined to reverse the venue and to blame the disuse for the destruction of the vessels. This question has also a close bearing upon the etiology of "senile high tension." We should not overlook the fact that the senile shrinkage of the body means the disappearance of vast networks of capillaries, whilst none of the "anatomical" arteries and veins are destroyed. This fact opens up various considerations which space does not permit me to discuss, but it may possibly be a factor in the increase of arterial pressure and may be connected with the physiological necessity for a higher pressure to permeate less patent channels and to stimulate more torpid cells. The most familiar of our instances of wholesale destruction of capillaries secondary to disuse is furnished by the atrophic vesicular emphysema of the obese in relatively early life. Had they not failed to exercise their lungs their pulmonary capillaries, which were pervious and healthy, and their likewise healthy alveolar septa, would not have been eaten away.

In regard to the mechanism of the arterial disease I find myself in entire agreement with Sir Lauder Brunton if I am right in assuming that "stagnation and obstruction," although he does not specially mention them, are implied in his suggestion that restricted arterial oscillations are a cause of arterio-sclerosis. My own views are indicated in the following extract from "An Introduction to the Clinical Study of Vascular Disease," delivered on June 19th, 1906, at the Medical Graduates' College and Polyclinic.[1]

> An efficient elastic fibre is essential to the continued health and fitness of the artery, and an exceptionally perfect fibre is probably the first condition for longevity. Besides this circulatory function, there is another duty entrusted to the elastic fibre, that of *promoting its own nutrition and that of the entire arterium*, by furthering the intramural circulation of plasma. As in the heart itself, the rhythmic pumping action of systole and diastole may be regarded as a condition of existence; and this would be favoured by oscillations of ample extent and

[1] Cf. Edinburgh Medical Journal, September, 1906, p. 204.

of good quality. Its impairment would be a source of relative lymphatic stagnation and a fertile but hitherto little noticed cause of obstruction and disease. It may be also here mentioned that just as cardiac rest and nutrition are proportional to the duration of the cardiac diastole, the arterial wall, much less richly supplied with capillaries, needs all the rest and all the nutrition which perfect oscillations can afford. The inelastic artery will be less thoroughly rested, refreshed, and nourished. It is thus apparent that the elastic fibre, when circumstances are not unfair, works out its own salvation together with that of the other vascular tissues.

In conclusion and *à propos* of the workhouse where the few stragglers left behind by their departed millions gravitate into a somewhat considerable senile company, there are unrivalled opportunities open to the industry of the resident medical officers for the good work of informing us from their own systematic observations whether old age is most often attained without much arterial disease or in spite of a great deal of it, an elementary question which still begs a solution in the best interests of longevity.

I am, Sirs, yours faithfully,

Curzon-street, Mayfair, W., Nov. 18th, 1906. WM. EWART.

STREET AMBULANCE SERVICE.

To the Editors of THE LANCET.

SIRS,—The automobile ambulance recently constructed for the City of London, which, though not at present on duty, has appeared at the Lord Mayor's show and subsequently at Olympia, may be regarded as the first step of the kind for providing rapid transit vehicles for dealing with accidents and medical casualties happening in the streets of the metropolis. Most important as this is it is no less necessary that the equipment of these vehicles should be in all other respects such as to secure the most efficient service available in the form of first aid.

It has been suggested that the London hospitals, which are chiefly concerned in dealing with these casualties, might contribute most importantly towards this end—not by any expenditure of money but by undertaking to provide approved volunteers in the persons of advanced medical students for short and definite periods of service in connexion with these vehicles. The information and experience gained in this way in promptly dealing with accidents and casualties is little short of that from a surgical dressership. I can speak of this from my own personal knowledge derived from hospital experience where this system was in practice. Service in connexion with such ambulance vehicles was keenly contested for and when efficiently performed was duly certified and recorded. The motor ambulance should be centred in the immediate locality of the hospital which is to serve as its base. Though this may not always be possible there are, I believe, but few hospitals in London which could not find standing room for a motor ambulance when on duty. In case of war those who have served as volunteers of this kind might prove of great value to the State as being so many more practically acquainted with the removal of injured persons and the necessary appliances.

I am, Sirs, yours faithfully,

REGINALD HARRISON.

Lower Berkeley-street, W., Nov. 26th, 1906.

FATALITIES UNDER ETHYL CHLORIDE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 24th, p. 1473, Dr. T. D. Luke of Edinburgh states that in May, in his endeavour to estimate the number of times ethyl chloride had been administered in this country during the last three years, he had arrived at the figure of 450,000. He now desires to correct that estimate and places the figure at 1,500,000, which, to say the least of it, is a very extraordinary difference and emphasises what great care should be employed in dealing with statistics to render them of any value. The latter estimate is based upon the fact that the London agent of Messrs. Duncan and Flockhart has informed him that during this period they have sold sufficient ethyl chloride for 1,500,000 administrations of five cubic centimetres each. He then includes other manufacturers in quite an arbitrary manner, allotting to them another 1,500,000 administrations, thereby arriving at the very respectable total of 3,000,000. From these figures he then proceeds to work out the mortality for Great Britain, where 20 fatalities have been reported during this period, as 1 in 150,000.

I submit that this method of arriving at mortality statistics is misleading and valueless. Because a manufacturer has sold a certain amount of ethyl chloride it does not follow that it has been consumed in producing anæsthesia. The quantity of ethyl chloride in the hands of retailers, chemists, surgical instrument makers, hospitals, and other institutions throughout the kingdom must be very large and for which no deduction has been made. Again, a large amount of ethyl chloride is wasted in every institution from want of skill in students, nurses, and others fixing the tap in the phials; in summer I have frequently seen half the contents lost in a few seconds from this alone, due to neglect of the precaution of cooling the phial before removing the screw. Bottles are often carelessly placed horizontally on the table and when next required are found quite empty. Even when purchasing ethyl chloride it is wise to examine the phials, otherwise you may find that some are already half empty from evaporation. Full bottles are sometimes dropped and broken and the contents lost. Whole cases of ethyl chloride might leave the manufacturers, be lost or smashed in transit, and never used for anæsthesia at all.

For the above reasons I maintain that the amount of ethyl chloride sold by the manufacturer is no criterion that it has all been utilised in producing anæsthesia and that statistics deduced from such a crude method are totally unreliable and unscientific. The proper means of arriving at such statistics is by collecting the work of those institutions and practitioners who keep a record of the administrations.

I am, Sirs, yours faithfully,

Wimpole-street, W., Nov. 27th, 1906. C. CARTER BRAINE.

To the Editors of THE LANCET.

SIRS,—General practitioners will be very cautious in using ethyl chloride (Dr. T. D. Luke's figures notwithstanding) so long as a sudden death occurs in a healthy subject without reasonable cause. What an anæsthetist to a general hospital might view with equanimity would be quite unthinkable for a general practitioner in a small district—a death under an anæsthetic. With nitrous oxide and the nitrous oxide-ether sequence I cannot see why general practitioners should be tempted to use less safe anæsthetics.

I am, Sirs, yours faithfully,

A GENERAL PRACTITIONER OF MEDICINE.

Nov. 26th, 1906.

DELAYED CHLOROFORM POISONING.

To the Editors of THE LANCET.

SIRS,—In the interesting and valuable article on this subject contributed by Mr. E. D. Telford and Dr. J. L. Falconer to THE LANCET of Nov. 17th, p. 1341, there are statements which I venture to think need correction. On p. 1343 the writers say: "Whereas any general anæsthetic may induce aciduria, yet the fatalities have occurred after chloroform alone." And again they remark, "Only in the rarest instances does that disturbance" (of metabolism) "result in death and in those instances chloroform is the anæsthetic used." The writers have apparently overlooked the fact that in three of the fatal cases of aciduria in children, and in three non-fatal cases recorded by Dr. Brackett, Dr. Stone, and Dr. Low [1] the anæsthetic employed was ether and not chloroform. Also in two fatal cases reported by Kelly, ether was the anæsthetic used.[2] These facts seem to support the suggestion by Mr. Telford and Dr. Falconer that "the state of narcosis is a more important factor than the action of the drug" in the causation of post-anæsthetic aciduria. Mr. Telford and Dr. Falconer have added an important item to our knowledge of the subject in showing that ethyl chloride, like chloroform and ether, has the effect of producing temporary aciduria. The credit for attributing the now well-known symptoms of delayed poisoning by anæsthetics to acute acid intoxication (aciduria) is due to Dr. Brackett, Dr. Stone, and Dr. Low. I had, indeed, the year before their paper appeared, suggested that operations under chloroform might be dangerous to subjects of attacks of gastric catarrh or so-called "biliousness" associated with "the sweet and characteristic odour of acetone in the breath,"[3] but the full analogy between these cases and those of delayed chloroform and ether poisoning was enforced by Dr. Brackett, Dr. Stone, and Dr. Low. An equally important observation which they made

[1] Boston Medical and Surgical Journal, July 7th, 1904.
[2] Annals of Surgery, February, 1905.
[3] THE LANCET, July 4th, 1903, p. 10.

was that in their fatal cases after etherisation, the liver and other organs showed fatty changes which, from the description given, seem to be precisely similar to those attributed to the action of chloroform.

If this be so it lends support to the view that the predisposing cause of delayed poisoning by chloroform and other anæsthetics is a pre-existing and morbidly fatty condition of the liver. For although it is without dispute that prolonged inhalation of chloroform will induce extreme fatty changes, ether is only capable of producing them to an infinitesimal extent. Therefore, if a markedly fatty liver is found in fatal ether cases it follows that it must have been fatty before the inhalation. Additional reasons for suspecting a pre-existing fatty condition of the liver are: 1. The difficulty of believing that such profound fatty metamorphosis as has been seen in the liver after doses of from half to one drachm of chloroform, and an inhalation not exceeding a few minutes, can be produced thereby. 2. It is well known that sepsis will give rise to an extremely fatty liver. The majority, though not all, of the fatal cases of supposed delayed chloroform poisoning have been met in septic cases. Therefore we may assume that the fatty state of the liver found in septic cases preceded the operation, at all events to some extent.

The theory that fatty livers render operations under anæsthetics dangerous is not new. Symonds of Oxford suggested it in 1850 and Verneuil in 1881. Although non-proven it is plausible. It serves to explain how fatty acid intoxications are brought about by anæsthetics. Acetone and its poisonous precursors β oxybutyric acid and the like which cause the symptoms of fatty acid intoxication are derived from imperfectly oxidised fat. An important function of the liver is the metabolism of fat. If surcharged with fat it may become inadequate to deal with it, and in consequence the general circulation may be flooded with noxious fatty acid products and acetone which are normally excreted by the kidneys without danger to life, though often with all the symptoms of acute acid poisoning.

Granting the existence of a liver overcharged with fat, it is not difficult to imagine that the effect of a general anæsthetic, especially chloroform, may be as the "last straw" in further reducing the oxidising power of the liver and in preventing excretion of noxious fatty acids by its specific action on the kidneys. Wells[4] has suggested that chloroform causes these fatalities by destroying the synthetic, whilst not interfering with the proteolytic, activities of the hepatic cells. This may be true, yet, needless to say, chloroform would be invariably fatal were not an additional factor present in some, though not in all, cases. It seems probable that this factor is the presence in the liver cells of accumulated fat. The fact noticed by Shenk that animals vary considerably in their susceptibility to the after-effects of chloroform may also be due to the degree of fat present in the liver at the time of inhalation. As regards the causation of surplus storage of fat in the liver, sepsis has been mentioned. Diabetes is a well-known cause of fatty liver and diabetic coma is due to acid intoxication.

Mr. Telford and Dr. Falconer suggest that rickets is a predisposing cause of delayed chloroform poisoning. Others have thought that infantile paralysis and fright are responsible. As a matter of fact, these fatalities after anæsthetics are not confined to the subjects of rickets or of infantile paralysis. But child cripples of any kind are frequently over-fed with fattening agents, starchy carbohydrates, and cod-liver oil. The result may be to overcharge their livers with fat and so render a general anæsthetic dangerous. In my own cases fright does not appear to have played a part, yet fright may produce deficient oxidation and therefore acetonuria. Starvation leads to storage of fat in the liver and is another cause of acid poisoning and hence arises the importance of refraining from operations on starving subjects. In a case reported in the *Journal of the American Medical Association* of Oct. 13th, 1906, a patient is said to have died from acute yellow atrophy of the liver after an operation under chloroform. She had swallowed nothing but half a cup of chocolate for 60 hours before the operation.

As regards the danger of a general anæsthetic in cases of cyclical vomiting with aciduria, the two instances mentioned by Mr. Telford and Dr. Falconer seem to suggest that the danger consists in operating on a patient who is either on the eve or at the onset of a storm of cyclic vomiting and aciduria. In the intervals of such storms an anæsthetic may be free from danger because the excess of fat which had been gradually stored up in the liver is broken up and discharged in the shape of acetone and fatty acids by the kidneys at the end of the storm. Support is lent to this view by the observation of Mr. Lewis Beesly[5] that anæsthesia is dangerous in the presence of *acute* acetonuria.

The practical outcome of the opinions which I have inperfectly expressed are: 1. Operations should be delayed when possible if a fatty liver be suspected. It may be suspected in subjects of rickets and infantile paralysis who have been overfed with fattening food and under-exercised; in cases of sepsis and diabetes, and when a history of cyclical vomiting is obtained. 2. When a child has recently vomited apparently without cause, an intended operation should be postponed. This precaution has been neglected in many fatal cases recorded. 3. When fatty liver is suspected the patient should be kept for some days on a diet restricted in fats and starch. 4. Bicarbonate of soda should be given meanwhile in order to neutralise fatty acids which may be present. 5. Starvation and fright will both give rise to acute acetonuria. The effects of fright may to some extent be combated by avoiding starvation. Nutrient enemata should be given two hours before and immediately after an operation. 6. Although any general anæsthetic may be dangerous in the presence of a fatty liver, chloroform is most dangerous of all on account of its specific action on the liver and kidneys.

In conclusion, I would deprecate again the "kismet"-like attitude of those who attribute death from delayed poisoning by anæsthetics to idiosyncrasy. Idiosyncrasy to the action of a drug is never fatal except in the presence of some underlying morbid condition which in the instances now considered appears to be a morbidly fatty liver. With apologies for trespassing so largely on your space,

I am, Sirs, yours faithfully,

LEONARD G. GUTHRIE.

Upper Berkeley-street, W., Nov. 19th, 1906.

[4] Transactions of the American Medical Association, 1906.

[5] Brit. Med. Jour., May 19th, 1906.

THE SANITARY CONDITION OF ST. MORITZ.

To the Editors of THE LANCET.

SIRS,—It is with much regret that I am forced once more to return to this subject. In a letter published in THE LANCET a year ago and signed by Dr. J. F. Holland, British Consul, and Dr. P. Gredig, president of the Society of Physicians of the Upper Engadine, in reply to one of mine I was assured that the drainage was carried out into the river Inn, that the system was sound and complete, and there was no danger to the public health.

On Sept. 8th a letter appeared in THE LANCET signed by Mr. H. Campbell Jenkins, in which he casts considerable doubt upon the accuracy of these statements. I have waited patiently to see if any reply were made to this letter but so far as your columns are concerned I have failed to find any mention of the subject. The matter cannot rest in this unsatisfactory state. I have discounted many statements made to me by several people whom I have sent to St. Moritz, because I know how easily the public may be misinformed and I have produced Dr. Holland and Dr. Gredig's letter in support of my statements that the drainage was now "quite correct." However, the above-mentioned letter by Mr. Campbell Jenkins is a direct public challenge and we cannot pass it over nor discount it until we know the real truth. St. Moritz owes much to the British support and we as advisers of the British public in health matters have a perfect right to ask the simple and straightforward question, Is the sanitation of St. Moritz all that it should be? If it is, why do not the local authorities of St. Moritz get a recognised firm of sanitary engineers to inspect and then publish their report? This would settle the matter once for all and stop the under-current of suspicion which one is now constantly meeting when a trip to St. Moritz is suggested. The public, at least the British public, are too well educated in sanitary matters to be put off by vague statements. They want definite assurances and proof such as can be given by properly qualified engineers only. We have a right to ask the local authority to put us in possession of this proof. No public health resort can afford to disregard the demands of its supporters, more especially when these demands are

only reasonable and just, as in this instance. I most sincerely hope the local authorities of St. Moritz will see their way to clear this matter up before the discontent makes itself manifest by appearing in the columns of the daily press.

I am, Sirs, yours faithfully,
T. W. PARKINSON, M.D. Edin.

Sloane-street, S.W., Nov. 21st, 1906.

MORAU AND JENSEN'S TUMOUR.

To the Editors of THE LANCET.

SIRS,—No one disputes that in Morau's experiments tumours developed in mice inoculated or fed with tumours. In the inoculation experiments the tumours developed not only at the site of inoculation, but also, and apparently quite as frequently, they developed remote from it, although in sites corresponding to the anatomical distribution of the mammæ in the mouse. Tumours developed from three months to more than a year after inoculation had been practised on mice no longer young at the time. In the feeding experiments large multiple tumours developed in the mammæ of an old female, and a small tumour in the axilla of an old male nine months after the commencement of their cancerous dietary. Morau expresses no surprise at the irregular distribution of the tumours developing after inoculation; it was in agreement with the inference that some causative agent (*virus néoplasique*) capable of dissemination from the alimentary canal was responsible for the positive results of the feeding experiments, for what is described as general dissemination of the tumours, as well as for the cachexia.

The histological character of Morau's tumours varied, but none had the features of Jensen's tumour. The tumour serving as the starting point of Morau's experiments was a hæmorrhagic adeno-carcinoma of the mamma—one of the commonest forms of tumour of this organ, but of a type which is very difficult to transplant, and has only been transplanted by Morau and ourselves. There is no evidence to prove that even when the tumours developed at the site of inoculation some of them did not arise spontaneously. I am, however, far from asserting that all his inoculation experiments were negative, for obviously many were positive.

The two facts—(1) that many tumours arose at a distance from the site of inoculation; and (2) in animals fed with tumour material—prove that every tumour developing as described, arose spontaneously—i.e., independently of the experimental procedures—for in successful transplantation experiments tumours invariably develop at the site of inoculation and never develop as the result of feeding. In short, the process of the transmission of carcinoma experimentally, as we understand it, owing to the work of Jensen and of the Imperial Cancer Research was utterly unsuspected by Morau and to-day is not comprehended by Mr. W. Roger Williams. What Morau describes as dissemination is also contrary to the facts as we now know them, and in reality supports the view that the spontaneous development of new tumours in other parts of the mammary apparatus confused the results of the experiments.

I have shown with Murray that young mice are more suitable for the transplantation of carcinoma than old and that mammary tumours develop spontaneously in mice with greatest frequency in the last third of their existence which rarely extends to three years. Morau specially states that he selected mice large enough and old enough to withstand his experimental procedures; it is therefore not surprising that some of his positive observations were obtained in animals 18 months after birth, and others in animals which had attained the extreme limit of life. The long time the majority of the tumours took to develop, the use of animals no longer young, the varied sites of development, the nature of the so-called dissemination, and the differences in the histology recorded by Morau all point to his having observed many spontaneous tumours in a number of aged mice. Certain of his observations are in this respect parallel to some by Borrel on mice kept in "cancer-cages" and to others by Murray and myself on the possibility of inherited susceptibility to cancer. The natural incidence of cancer in old age requires to be allowed for in interpreting the positive results of all three sets of experiments. Evidence for the continuity of the growth of Morau's original tumour through the four consecutive transferences of his 17 series of experiments is entirely wanting, because Morau regarded it as a matter of indifference whether the sub-inoculations were made from tumours which had developed at the site of inoculation or elsewhere. The claim Mr. Williams makes is groundless.

It seems needless to point out that Jensen's tumour is only one of 50 mammary tumours of the mouse studied in the laboratories of the Imperial Cancer Research Fund and only one of 26 transplantable mammary tumours. These tumours form a graduated series, from adenomata, with a close resemblance and direct anatomical relation to normal mamma, to others typically carcinomatous and undistinguishable from Jensen's tumour. The papers published from the laboratory of the Imperial Cancer Research Fund have in no case been based solely on observations on Jensen's tumour, although prominence has invariably been given to the value of Jensen's work once the nature of his tumour was determined. Four of the 26 transplantable tumours give constantly from 80 to 100 per cent. of successful inoculations.

Mr. Williams's comment can only be explained by a want of personal knowledge of the anatomy and the histology of the mouse's mamma, of the benign and the malignant new growths to which it is liable, as well as of the fundamental truths on which the experimental study of cancer has been founded.

I need hardly reaffirm what the President of the Royal College of Surgeons has already stated in your columns, that careful consideration has been given to Morau's work in the deliberations of the Executive Committee of the Imperial Cancer Research, that Mr. Henry Morris himself paid tribute to the value of his work in the Bradshaw Lecture of 1903, and that his work has been referred to, whenever opportune, in the official reports and other papers published from this laboratory.

It is entirely unfortunate that such a misconception of Morau's position in the development of the experimental study of cancer on the part of Mr. Williams has necessitated these criticisms which do not detract from the appreciation I have for the pioneer work of the distinguished French investigator who unfortunately was not spared to interpret his experiments in the light of subsequent investigations. He was dead before Jensen's papers appeared.

I am, Sirs, yours faithfully,
E. F. BASHFORD.

Imperial Cancer Research Fund, Examination Hall, London, W.C., Nov. 26th, 1906.

STOKES-ADAMS DISEASE AND CARDIAC ARRHYTHMIA.

To the Editors of THE LANCET.

SIRS,—In the interesting paper by Dr. J. Hay and Dr. S. A. Moore in THE LANCET of Nov. 10th on a case of this description one remark, casually introduced, seems to me to call for further information which they may be able to give. At the commencement of the article under the head "*History of the case*" they say: "After the patient's discharge from hospital on Dec. 8th, 1905, he took great care of himself, exercised caution in his diet, ceased to indulge even moderately in alcohol, and kept his bowels open." Here there is one conspicuous omission—his habits as to *tobacco*. Further on in the paper, in a description of a series of fits which occurred on one day more than a month after his second admission to hospital and during a lengthy period of repeated "syncopal seizures," come the significant words: "*He asked for his pipe.*" Are we to understand from this that, throughout this severe illness in hospital, the patient was habitually smoking tobacco, and if so in what amounts? I am making no suggestion as to the causation; I am only asking for information on what seems to me a point at least of equal importance with the alcohol habit.

I am, Sirs, yours faithfully,
Hendon, Nov. 20th, 1906. HENRY BAZETT.

A NEW ASPECT OF THE PATHOLOGY AND TREATMENT OF LEPROSY.

To the Editors of THE LANCET.

SIRS,—I have just read with great interest the article in THE LANCET of Oct. 20th, p. 1064, by Dr. R. P. Black of Cape Town under this title, in which he brings forward some valuable facts with reference to the part played by the initial lesions of the nose in leprosy and advances the theory that here we have the starting point of this disease—the bacilli

first gaining entrance through some primary sore in the nasal passages. In my work on Leprosy in British Guiana, published in 1881, and in the *Journal of Laryngology*, vol. iv., 1890, I have dealt with the subject of leprosy in the upper air passages, and the late Mr. Lennox Browne, who had visited Robben Island, in his well-known work on "Diseases of the Throat and Nose," p. 579, thus refers to it: "Lepra of the nose is even more common than in the larynx, and, indeed, epistaxis is probably the first symptom that the mucous membrane of the upper air passage is affected. Hillis, who holds this opinion, has recorded one case in which the patient's nose bled long before he knew he was a leper. In three-fourths of the cases tabulated by this observer more or less nasal disease was present. The actual conditions were very various and comprised hyperæmia and infiltration of the mucous membrane, tuberculation of the turbinated bodies, destruction of the septum and of the whole cartilage, and stenosis of the nasal orifices." I can quite understand how easy it would be for the bacillus leprae to gain entry in the manner alluded to by Dr. Black, but it must be remembered that cases are on record where entry was probably gained in another way—one in particular where a post-mortem wound on the hand is believed to have almost certainly caused the disease. Again, in anæsthetic or non-tuberculated lepra I have reliable histories of cases where from beginning to end there was no nasal affection whatever.

I am, Sirs, yours faithfully,

Dublin, Nov. 18th, 1906. JOHN D. HILLIS.

THE WITHDRAWAL OF MR. RUTHERFORD MORISON FROM THE GENERAL MEDICAL COUNCIL CONTEST.

To the Editors of THE LANCET.

SIRS,—I owe a humble apology to the supporters of Mr. Rutherford Morison which I trust you will allow me to offer through the columns of THE LANCET.

In some mysterious way I had got firmly fixed on my mind that the 25th was the last day on which nomination papers could be handed in, and in order to be on the safe side I had them all ready to send off on the morning of the 22nd, when in several ways I was made aware that I had made a serious error. I can only plead mental aberration and must ask Mr. Morison's friends to believe that the mistake has been most mortifying to me. After all the work that had been put into the campaign and the many influential promises of support, to feel that through my remissness our candidate will not "have a run for his money" is most humiliating to me. I must take the whole responsibility as the chairman of the committee and my co secretary had left this detail entirely to me. I can only, in conclusion, ask our friends and supporters to take the matter as generously and philosophically as the candidate did on hearing of it.

Mr. Morison desires me to say that he hopes his supporters will now transfer the vote they intended to give to him to Dr. H. A. Latimer who is now running in conjunction with Dr. Langley Browne and Dr. L. S. McManus. The return of this trio will, he thinks, be the best way of forwarding the policy he was advocating.

I am, Sirs, yours faithfully,

ALFRED COX.

Cotfield House, Bensham-road, Gateshead, Nov. 26th, 1906.

A PERSECUTION AND A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—In your issue of July 28th you courteously published at my request my repudiation of any knowledge of the "Dr. A. W. Wheatley," conducting the column "My Ladies' Boudoir" in the *Free Lance*, or connexion of any kind with him or his methods. Through the agency of my solicitor, and at my instigation, this column was suppressed in the *Free Lance* and the advertisement ceased. The annoyance has, unhappily for me, cropped up again in a more aggravated form and the "du Barri" Company of 17, North Audley-street, in their pamphlet "What the Leading London Papers say about the du Barri Face Treatment," are widely advertising *this* "Dr. A. W. Wheatley, the well-known authority," as the medical supervisor of the institute.

As I have before said I am the only A. W. Wheatly on the British Medical Register, and I am annoyed to find that I am called upon again so soon to repudiate any knowledge or association of any kind with this man, and I trust to you, Sirs, to give due publicity to the facts, which are so very damaging to me. I should like also to elicit from you whether I should, in the circumstances, be contravening any unwritten medical law if I published my disclaimer in the lay press? I am, Sirs, yours faithfully,

ARTHUR W. WHEATLY, M.B.Durh., M.R.C.S.Eng.,
Consulting Surgeon to the Western Ophthalmic Hospital.

Kensington, W., Nov. 21st, 1906.

*** Dr. Wheatly has been injured in the lay press and naturally desires to right himself in that press. There is no harm in his doing so; he will be able to judge when publicity has served his purpose.—ED. L.

"BREAKING BABIES' NIPPLE STRINGS:" A CRUEL OLD PRACTICE.

To the Editors of THE LANCET.

SIRS,—There is a practice in vogue in the county of Somerset and, I am informed, in other counties also, connected with midwifery which ought to have the special attention of inspectors employed by the local supervisory authorities created by the Midwives Act, 1902. I mean the practice known as "breaking the nipple strings" in newly born female infants. It is rarely done to male children—I have only had one such case. It is done by many of the midwives recognised now as *bonâ fide* by the Midwives Act and by other women as well who only act as nurses. The *modus operandi* is as follows. The nurse or midwife takes the infant's nipple between her finger and thumb and "works" it until a secretion, which the operating dame calls the "milk," issues from the little teat. Both breasts are manipulated in the same way. In every case swellings result and at times abscesses form. It goes without saying that such handling must cause exquisite pain. The chief reason given for it is that the child may in after life have a well-formed breast and nipple.

Over 30 years ago, when I came and settled in Somerset, I used frequently to meet with these abscesses in very young infants and was at a loss to account for them. The women in charge would not enlighten me, no matter how I questioned them, as to how they were caused. They would say, with a look of feigned stupidity, "I am sure I don't know," or "I suppose it came of itself, like other things," or it might be, "That is for you to say." I had not then become acquainted with the highly cautious character of the Somerset folk; it takes a good while for a stranger to do this. I may illustrate this trait by quoting a piece of friendly advice once given me by a cobbler respecting certain questions which I was asked, "Lor! Sir! doan' ee answer the likes o' he straight; put 'un off like, put 'un off—get over 'un by going round the corner." I was in the position of the "he" and the "un" then. I got straight enough answers, but not in the line desired. After a time, however, I succeeded in piercing this resistance, which had appeared for a time like an impenetrable wall. It was done bit by bit.

I may describe this practice by giving the substance of conversations which I had with an old midwife, who was a good deal over 80 years of age, some quarter of a century ago, then too old for more work and in ill health. During my professional attendance upon her I gained her confidence and learned from her what her practice had been. She said she "always did the little breast, because it was good for the child in after life," and that "it was the right thing to do, and that all proper midwives and nurses did it." As my old patient had acted as monthly nurse among the well-to-do, as well as among the poor in this neighbourhood (Wellington) I asked if the mothers in those cases approved of what she was doing. Her answer was, "Lor! Sir! they ladies don't know nothing; besides the dear babe must be attended to." "What of the doctors?" I inquired. To this she replied with a toss of her head, that "doctors don't know anything about babies"; besides she never told them anything. I asked her if she ever found abscesses after her fingering; she replied that "she did not hold with being so hard as to cause abscess," and then added, "but there, they do sometimes happen." My old patient was a kindly woman and believed the operation was right and always ought to be done, and she was only one out of a great many.

At one time I fancied the practice was only local, but inquiries have satisfied me that it is widespread and that it is

adhered to and believed in as a religious rite by old nurses and midwives. The belief in the duty of carrying it into effect is fully shared in by many mothers and their friends, and what they believe and practise they teach the younger ones. It was but a short time ago that one of the recently trained midwives informed me that in confinement cases the mothers and friends have often intimated to her that they hoped she would see to the baby's breasts and other things, as other nurses did; on being asked how she managed, she replied that she "got over'um by going round the corner." She is a Somerset woman and the "nipple strings" were not broken in her cases. One occasionally finds among one's patients a woman with ample chest and mammary development but with teats imperfect or absent, their places only indicated by puckered depressions, all owing, as I am constrained to believe, to this interference.

In October last year, at a small farmhouse, I casually asked the monthly nurse who was dressing a two-days' old baby at the time of my visit if she had done anything to the child's breast; she answered brightly, "Yes, yesterday; I don't hold with doing too much." I examined the bosoms; they were a little tumid, but nothing much. When I told her that it was wrong to meddle at all and that it injured the child's nipples she looked at me with surprise and said that she "had always done it" and added, "Dr. —— saw me doing it in a case and he did not say anything." She, as well as the child's mother, believed that it was the right thing to do and that it was for the good of the baby, because, as they maintained, if it was not done the baby when she grew up would not have proper nipples. I directed the attention of the two women to the mother's bosoms, which were full and well-developed; only the right had no nipple that could be taken hold of, it was shrunken but the left was good. She had had 14 children and had suckled them all on the left. When I suggested that the reason why the right was defective was because in her early infancy it was so severely handled that the teat was so injured that it never recovered and had not developed, she appeared surprised at the suggestion, but I question if she believed me; but when I added that there were no strings to break she looked puzzled and said nothing. These women are not cruel or unkind and the operation is done by them conscientiously from a sense of duty. It is but a reasonable conclusion to arrive at that the reason why so many women do not suckle their own babies is because they are not able to do so owing to their having had their mammary organs injured by this mischievous practice soon after they were born.

Why and when this cruel and superstitious practice was first started I cannot find out; but I venture, however, to offer the following suggestion as to what may have been the reason for it. It seems to me an instance of "sympathetic magic" surviving from ancient times. The belief in this is still strong among many people in the land—at one time it was well-nigh universal. For instance, and keeping to the early infancy period: if the navel cord is permitted to fall on the floor as it separates from the baby it is believed to be unlucky and will cause the child to be a "wetter of its bed" as long as it lives. I have noticed a young mother exhibiting signs of real distress over the occurrence and severely reproving her attendant for the mishap. Next, if an infant's stooling is thrown into the fire the infant, owing to this, will suffer from abdominal pains. The burning of the after-birth is done that the mother may have painless catamenial periods in the future. Those of us who are in close touch with the people and observant can furnish more such beliefs and produce instances where they are carried into practice. The inducing of a semblance of flow of milk in the child's breasts by the milking action will by means of sympathy induce a flow of nourishing milk from the mother's breasts. This sympathetic tenet and the vigorous fingerings mentioned earlier appear to lack harmony, but so do all superstitions when the light of reason is turned upon them.

The following is an instance of the hold the belief has upon the people. A few weeks ago our district nurse attended a labourer's wife at her confinement and regularly visited her case for 12 days. Then she intimated that probably she would not call again. Up to then the child's breast had not been meddled with. On the thirteenth day she casually called in at the house and had a look at the child, when she found both breasts red and swollen. What had happened was this: the mother and her friendly sympathisers, thinking they had done with the trained nurse and her new ways, invited an old neighbour who was considered an "understanding woman in these things" and she set to and "did the baby's breasts" in accordance with her practice. Later still, an inquest was held in the case of a baby who was suffocated by being overlain. My son, Mr. Herbert Meredith, was medical attendant, and in examining the infant after death he found a large abscess in one of the breasts. It was not deemed necessary at the inquest to inquire how it was caused. The woman in the place knew all about it.

Yet, as I have intimated, the women who practise and sympathise with this work are not cruel or unkind people; they are so deeply impressed with the necessity of interfering with the children's breasts that it is practically impossible to prevent their doing so when a safe opportunity presents itself. They only act as they have been taught, and evidence that the work is cruel and has never done good has not entered their minds nor influenced them. The inspector of registered midwives employed by the Somerset county council mentions in her official reports many instances where midwives meddle with infants' breasts and some resolutely defend their practice. A medical practitioner writes from the eastern side of the county that he has a midwife in his neighbourhood who cannot be induced to leave infants' breasts alone. In many cases these zealous and misguided women have extensive practices and the question how to put an end to such doings should be faced. Why not engage the services of the Society for the Prevention of Cruelty to Children? would be about the first course suggested. There can be no better field for the society's services than in this matter. But how are the officers to reach the scene of the evil seeing that usually the families in which it takes place are in sympathy with the acts as much so as the nurses who manipulate. What women of the order I am referring to believe as an article of faith, they teach the younger ones during those friendly chats and gossips which enter so largely into the social life of people. Teaching in this manner produces deep and lasting impressions upon the minds of young girls present at these gatherings. It is not to be wondered at therefore that many of the untrained midwives—I mean not trained in accordance with present-day requirements—should object to be told to discontinue the practice of *breaking the nipple strings* in newly born infants. They are only doing that which they have been taught to do and that it is all for the child's well-being in after life. 1. A body of midwives properly educated would meet the case, but this will take a long time. 2. The formation of a form of mothers' meeting under the auspices of a religious denomination would be the means of reaching many of the women sympathising with the custom. Ladies belonging to the denomination could and no doubt would act a good part in the work. 3. What is wanted is a line of action by means of which the pernicious superstition could be altogether eradicated and its practice brought to an end. To attain this the younger members of the community must be enlisted in the service.

I would recommend, therefore, that the head teacher of each elementary school take the senior pupils in hand and talk to them about the practice which is worse than folly in that it is the cause of lasting injury and has not one redeeming feature. Young girls between 12 and 14 years of age are very susceptible and special teaching given at such period is sure to bear lasting fruit and prove a corrective to some of the dismal "chatterings" told in the "gloaming" or at any other time. There are many superstitions in the county which tend to unhappiness beside "breaking the nipple strings" that might be fittingly classed with it for the teacher's special attention.

I am, Sirs, yours faithfully,

Nov. 26th, 1906. JOHN MEREDITH, M.D. Edin.

GAS STOVES.

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to a report in THE LANCET of Nov. 10th on the results of a competitive trial of gas stoves conducted by the Coal Smoke Abatement Society recently. We do not know what publicity may have been given to this competition but this is the first we have heard of it or we should certainly have sent into it the Euthermic Ventilating Gas Stove, designed nearly a quarter of a century ago by Dr. Francis T. Bond of this city. We claim that this stove, to which the silver medal of the Smoke Abatement Committee was awarded in open competition in 1881, is now in its improved form,

as it was then, not to be surpassed as an appliance for the economical and effective use of gas for warming and ventilating ordinary domestic or other rooms, consistently with a due regard for hygienic conditions. And we may say in support of this claim that, irrespective of the adoption and recommendation of this stove by a large number of members of the medical profession, His Majesty's Office of Works has within the last few years fixed a considerable number of these stoves in public offices in various parts of the kingdom.—I am, Sirs, yours faithfully,

P.p. the Sanitary and Economic Association, Limited,
HAROLD F. TREW,
Acting Secretary; Sole agents for the Patentee.

Gloucester, Nov. 24th, 1906.

FREE FEEDING OF SCHOOL CHILDREN AT SAN REMO.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

San Remo, Italy, November.

SAN REMO boasts of being the first town in Italy where the municipality undertook to feed the children attending the primary schools. At Cremona and in other towns the children were fed but not by the municipality and at the public cost. Abroad San Remo is principally known as one of the most popular health resorts and winter stations of the Italian Riviera. The population consists of many small peasant proprietors who have land to till in the neighbourhood and of a number of artisans and waiters recruited in all the larger towns of Italy so as to do the work rendered necessary by the numerous visitors. These latter are mostly British and German and many villas and hotels have been built and furnished for them. The hotel waiters are so well organised that they have succeeded in electing one of their number on the municipal council. Indeed, in 1896 a Socialist majority was returned at San Remo. As the free maintenance of the children is one of the planks of the Socialist platform the organisation of free meals in the schools was one of the first measures adopted by the newly elected council. It was not till the year 1900 that the municipalities of Milan and of Vercelli followed this example. As a proof of the popularity of such measures it is encouraging to note that the municipalities of both these towns are Conservative. On this question of feeding the extremes of both sides of politics meet. If it was the Socialist municipality which commenced feeding the children at San Remo it was a member of a Conservative Government who introduced at Vercelli a system of school meals that is more complete and thoroughgoing than anything the Socialists themselves had ventured to attempt. The fact that to-day both parties are at one in this matter must greatly encourage those who advocate the establishment of the *refezione* or *cantines scolaires* for primary schools.

In the first instance, however, there was no such agreement. When in 1896 the majority of the San Remo municipality proposed to organise the *refezione* the minority laughed at the idea and treated it as absurd and as impracticable and utopian. Nevertheless, in spite of the opposition, a considerable number of meals were given during the very first year of office. Fortunately for the history of the movement elaborate statistics have been kept, and what the system means in money can be accurately estimated. Thus, during the first year that attempts to feed the children were made by the municipality—that is to say, from 1896 to 1897—there were 1618 pupils inscribed and 1384 actually attended the classes. The total revenue or receipts of the municipality that year amounted to 713,234 lire or francs. Out of this sum 46,731 francs were spent on primary education. This equals one fifteenth of the total expenditure on the local government of the town. It is equal to 2·89 lire per head of the population, whereas the previous year only one-eighteenth of the total receipts had been expended on education, and this was equal to 2·40 lire per head of the population. The difference was caused by the fact that more assistance was given to the poor children and that 4518 lire, or £180 14*s.* 5*d.*, were spent in providing meals. The annual average cost for each pupil thus increased from 26·24 lire to 28·88 lire, or from £1 1*s.* to £1 3*s.* 1½*d.* By the following year the *refezione* was better organised, more extensively applied, and the cost increased to 7943 lire, or £317 14*s.* 5*d.* The number of pupils inscribed increased to 1845, and those who actually attended to 1492. The total outlay on education was 52,856 lire, and this is equal to 3·55 per head of the population. But while the expenditure thus increased the receipts were also augmenting and now reached the figure of 930,736 lire. Thus, though a larger amount was spent on education and on feeding, the proportion to the total expenditure fell to one-eighteenth.

At that time, however, public opinion had not been converted to the cause and the mere fact that the feeding of the children was the act of a Socialist administration helped to accentuate the opposition, especially of the Government. The auditors, acting on behalf of the State or central authority, threatened to disallow the amount of money spent on the meals and to compel the municipal councillors to reimburse out of their private pockets what they had illegally allowed to be spent out of the public funds. This, however, proved to be but an empty threat. According to the Italian law the Central Government has a right to interfere when a municipality is in financial difficulties. In that case the Government may limit municipal expenditure to what is strictly necessary and not allow any outlay on what may be described as luxuries. The municipality of San Remo had therefore a very easy reply. First and foremost it was not in financial difficulties. On the contrary, its receipts were increasing and the town was in a flourishing condition. If, nevertheless, the Government insisted on preventing expenditure on luxuries, then it should close the municipal theatre or the municipal casino, for surely such institutions were greater luxuries than the feeding of poor children. These arguments were irrefutable but the Government found another method of interfering. In 1898 some serious riots took place at Milan. There was much distress in the North of Italy and the Government appeared to be alarmed greatly by the state of ferment prevailing. The Socialist municipality of San Remo was dissolved and the Conservatives were installed in office. The two years of practical application had, however, sufficed to demonstrate so thoroughly the usefulness of the free feeding that it could not be absolutely abolished. The new administration sought, however, to re-introduce the charitable element. Instead of holding itself responsible for the expenditure it handed over the whole organisation to a committee of patronage and contented itself with giving this committee an annual subvention of 6000 lire, or £240. This it continued for the four years during which it remained in office. The annual municipal receipts rose from 908,733 lire in 1899 to 1,224,515 lire in 1902 and still only 6000 lire were given towards the cost of the free feeding of the children. It must be said, on the other hand, that if the municipal receipts were augmented there was no increase in the number of children attending the schools. Though the Conservative municipality did not spend much on the feeding of the children it increased the salaries of porters and various attendants at the schools and the subsidies to asylums where children are sent voluntarily. Thus the average annual cost of each pupil rose from 28·53 lire to 41·38 lire, though the proportion that this latter figure represents is only equal to one-eighteenth of the augmented total municipal expenditure.

Subsequently the Socialists returned to power. By that time all opposition to the feeding of the children had ceased. As already described, the Conservative party at Milan and at Vercelli had itself established the *refezione*. Consequently the municipal budget of San Remo for the year 1903 presents a very different aspect. Instead of a charity subvention of 6000 lire there was a direct municipal outlay of 12,934 lire, or £517 7*s.* 4*d.* The committee of patronage was abolished and direct management by the municipality, instead of being opposed by the Government, was on the contrary actively encouraged. Thus the amount spent on the meals given has increased each year, being 13,667 lire in 1904, 15,813 lire in 1905, and for 1906 the estimate is 16,153 lire, or £644 10*s.* 5*d.* During this last year the average cost per pupil for education and feeding is estimated at 58·15 lire, or £2 6*s.* 6½*d.*, or 4·80 lire, or 3*s.* 10½*d.* per head of the population. This is about double the amount of the school budget of the year 1896, that is, the last year before the municipality attempted to feed the children. In 1896 the average cost per pupil was 26·24 lire instead of 58·15 lire, and the cost per head of the population was 2·40 lire instead of 4·80 lire as in 1906. In spite of this great increase, the proportion of the general income devoted to education has not increased and is

for 1906 one-fifteenth of the whole, just the same as in 1897. If so much more is spent on education to-day it does not imply a greater burden on the population, but is, on the contrary, the witness of greater prosperity. In 1897 the population of San Remo was 16,189 and the municipal receipts amounted in all to 713,234 lire. For 1906 the population is set down at 20,027 but the estimated receipts are 1,434,946 lire. Some of this income is derived from direct taxation on property like the rates in England, but in Italy the *octroi* system is still maintained as the principal means of raising local revenue; therefore, if the income of San Remo has increased, this in the main indicates that more money has been spent in the town, more provisions have been consumed, and thus the town dues, or *octroi*, have yielded a larger income. In ten years this income has doubled but the fixed population has only increased 20 per cent. This is, of course, due to the large number of visitors who spend a part of the winter season in this beautiful spot. Being foreigners the latter are not included in the census of the population, but as they are large consumers of provisions they pay a considerable amount in indirect taxation for the expense of local government. A very considerable proportion, probably a good half, of the foreign visitors are British subjects, and if they have not as yet done much towards helping the underfed and degenerating children frequenting the primary schools in England they have with every pinch of salt and every meal consumed at San Remo contributed to secure the free feeding of the Italian children of that town. It would be difficult to prove that these visitors are worse off because of this, but there would be no difficulty in demonstrating that the children have greatly benefited.

Notwithstanding such advantages and a flourishing budget, the Socialist municipality of San Remo has not ventured to go so far as the Conservative municipality of Vercelli. At the latter town, as already described, all the children, poor and rich alike, receive their midday lunch at the expense of the municipality.[1] Those only are exempt who have a medical certificate that the meal would not suit them and these exemptions amount to not more than 10 per cent. of the pupils. At San Remo the number of pupils entered for the school year of 1905–06 was 1650: the number that actually attended was 1381. Of these 720 were entered in the books as entitled to the daily meal, but only 508 actually partook of these meals. Of these 274 were boys and 234 were girls. It will be seen that the proportion of children fed by the municipality was much below that of Vercelli—namely, 36 to 37 per cent. at San Remo and 90 per cent. at Vercelli. Further, of the children fed at San Remo a few paid for their meals. Of the 720 children inscribed about 40 were to pay if they attended. The amount to be paid varied from 1*s.* 2½*d.* to 2*s.* 5*d.* per month according to the means of the parents. Of course, the food, whether given to the children who paid the smaller amount or the larger amount or nothing at all, is the same in every case.

If a fewer number of children are fed at San Remo than at Vercelli they are, on the other hand, very much better fed. While opposition was still offered to the system an attempt was made to revert to the cold collation of bread and sausage. When once, however, the standard of living has been raised it is difficult to lower it again. The children having once become accustomed to warm meals made bitter complaints when they were given only a little cold bread and *salame*. Also, and perhaps fortunately for them, the sausage was on several occasions not fresh. This helped to justify the dissatisfaction and the warm meals had to be resumed. At present vegetable soup is given three times a week, and soup made with meat on the other two days of the school week. The meat, of course, is cut up and eaten afterwards. Looking over the accounts for the scholastic year 1905–06 it will be seen that the price of bread varied from 33 to 35 centimes (3¼*d.* to 3½*d.*) the kilogramme (2·204 pounds). Thus the bread is dearer than in England. The amount consumed in the year was 7573·5 kilogrammes. The meat cost 1·88 lire the kilogramme and 670·4 kilogrammes were employed. The macaroni and similar pastes cost 43 centimes the kilogramme, or a little more than bread, and 2983 kilogrammes were purchased. The rice cost 38 centimes and 1231 kilogrammes were required. Oil only cost 11½*d.* the litre and 268·70 litres were used. The consumption of wine, only 38½ litres, was restricted mainly to the attendants or given to a few of the more delicate children. The cost was 33 centimes, or 3½*d.*, the litre—roughly speaking, 2*d.* a bottle—which, as things go, is a good price to pay for wine in a wine-growing country. The potatoes cost 11 centimes the kilogramme, and 3356 kilogrammes were purchased, together with 930 kilogrammes of haricot beans at 41 centimes. Less than £2 were spent on fresh fish during the whole year, but salt, which is heavily taxed, cost more than £4. This, with a few other unimportant items, such as flavouring herbs, &c., constituted the material from which during the year 71,602 separate meals were served. The average cost of these meals was 17 centimes, or nearly 1½*d.* But this sum covers another considerable outlay which has not yet been mentioned and which involves a very important principle.

At Paris, at Vercelli, and elsewhere the position of the teachers has been brought forward. If they are obliged to attend to the children's meals then they are deprived of the relaxation in the middle of the day to which they are accustomed. For this extra work there should be extra pay and at Vercelli, as already stated, the teacher's salary has been raised by £2 per annum. At San Remo the municipality has acted with much greater liberality. It has selected eight or nine of the teachers to attend especially to the free meals and pays them over and above their ordinary salary £2 per month. As the schools are open for from seven to eight months this is an increase of £14 to £16 a year per teacher and the total cost last year amounted to £132 12*s.* Then a sum of £48 4*s.* was paid to servants, scullery maids, and others. At first the teachers were not employed to attend to the children during the meals and outside help was secured. But the children did not respect or obey these outside helpers so the services of their ordinary teachers had to be retained. The total cost, as already stated, of the free feeding amounted last year to £644 10*s.* 5*d.* for the 71,602 meals given to 508 children. Out of this sum the fees to the teachers and the wages to the servants absorbed £180 16*s.* The cost for management if there were a larger number of children fed would not be as great in proportion. The present municipality hopes to raise the outlay to about £1000 per annum and to feed, practically speaking, all the children whether poor or rich. It feels convinced that this would not only simplify matters and prevent some bad feeling but would be a considerable economy for the parents. The cost of the meals paid in taxes would be much less than the cost of the meals which the parents now give to their children at home. The only possible solution is to give the meals to all and without any charge to the individual. As it is, the parents have to send an application which is examined by a commission of inquiry. The commission judges by the amount of direct taxes paid by the parents whether their children should be fed gratuitously. The commission is very broad in its decisions, and any approach to poverty suffices to justify the gratuity of the meals. But there is always the liability of accusations of favouritism—the suspicion that municipal councillors do not like to refuse the requests of their electors. No such suspicions or accusations would be possible if it was an established rule that the cost of primary education should include the cost of a midday meal for all who attend the school. This would put an end to patronage and to favouritism. Also none of the children would be obliged to go home for their meal in the middle of the day. This going out into the streets is a recognised evil, as it is then that the pupils contract many bad and vulgar habits. Therefore the present municipality hopes soon to offer the midday meal free to all the children whatever the position of their parents. Also it is about to appoint a special medical attendant who will give gratuitously whatever medicine he thinks the children may need. This will be done in response to the agitation in respect to the spread of tuberculosis so as to discover the earlier symptoms among the children. At present the general medical officer of the town can be called in but there is no special medical officer for the schools. Again, and also in view of checking tuberculosis, some money is to be spent in enlarging the playgrounds of the schools. This will be a further inducement for the children not to go home for their midday meal.

Thus it will be seen that in Italy the movement for the feeding of the children in the primary schools was, as in England, started merely as a matter of charity and by private initiative. Then, in the course of time, some municipalities began to give free meals at the public cost. This at first evoked considerable opposition and the

[1] See THE LANCET, Nov. 10th, 1906, p. 1308.

legality of such action was challenged. In time, however, the contending political parties accepted the principle, the Government gave its approval, and now the rival factions compete with each other as to who shall feed the children in the best and most complete manner. In England we are only just approaching the threshold of the question. Therefore the experience of Italy, where it has been in the domain of practical politics for ten years, must be of considerable value. The Italian experience will help to indicate what developments are likely to occur in other countries when dealing with similar problems. On the other hand, as notably at San Remo, a considerable number of school children have now been fed, more or less well, for ten years, it is time that statistics should be forthcoming to illustrate the physical results. Comparisons of the death-rates during the school age, before and after the introduction of the free feeding, would be useful but periodical records of the weights of the pupils, together with chest and other measurements, would be still more conclusive. This doubtless will be organised by the special medical officer who is to be intrusted with the care of the children at the San Remo schools.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Hostel for Women Students.

SOME two years ago a hostel for women students attending Birmingham University classes was opened in a house which was obtained in the Hagley-road. It was soon so overcrowded that a second and then a third house was rented in the immediate neighbourhood of the first. All the houses are filled and applications have had to be refused. It was shown at the annual meeting of the supporters of the movement that the present method of renting houses was very expensive and it was stated that even if a building of sufficient size was provided the fees of the students would only suffice to pay the expenses of upkeep and management. In these circumstances it was determined to appeal for the necessary funds, about £12,000, to provide a building which would accommodate at least 50 students. Some of the speakers at the meeting urged the advisability of providing a similar hall of residence for men as soon as possible, but it may be questioned if there would be a great demand for accommodation there. It is obvious that if the fees are placed at such a figure they will not pay for the accommodation provided and interest on the outlaid capital, the provision of hostels is but a method of subsidising students, and it may be questioned if it is so advisable a method as the provision of good scholarships which would secure brains fit for further education.

The Physical Condition of Slum Children.

In the course of a lecture delivered by Dr. H. Bagster Wilson before the Birmingham branch of the British Child Study Association some very significant comparisons were made between the slum children of Birmingham and the children of Bournville. The statistics for these comparisons have been prepared by Mr. Haywood, the physical director of the Young Men's Christian Association. They show, apparently quite clearly, that taking children of similar ages both the girls and the boys of Bournville are distinctly taller and heavier and that they possess greater lung capacity than the slum children. The difference in weight between Bournville boys and slum boys was $9\frac{5}{16}$th pounds and the difference in lung capacity 22 inches, whilst in the cases of the girls the differences were $6\frac{1}{2}$th pounds and 11 inches respectively in favour of Bournville.

The Dental Hospital and the Teeth of School Children.

At the annual meeting of the Dental Hospital it was stated that the munificence of an anonymous donor who had provided £1200 for the purpose had enabled the committee to commence the examination and treatment of the teeth of the children in elementary schools. The work has been commenced in a school containing 1400 children whose teeth have been charted and the treatment found necessary is being carried out at the Dental Hospital. This is a new departure and one that must result in much good, but it is evident that it cannot be carried out universally by private means and if it is to be extended and continued the cost must fall eventually on the taxpayer. When this is the case the private dentist must not complain if people who now go to him claim to be treated at the hospital, for many taxpayers are finding it increasingly difficult to pay all the expenses to which they have been accustomed in association with their own families and also the expenses associated with other people's children.

The Dudley Guest Hospital.

The annual report of the Dudley Guest Hospital must have proved very satisfactory to the supporters of the hospital. During the year an eye department and an out-patient department have been added to the hospital; the number of cases admitted increased to 903, or 139 more than in the previous year; and the income increased from £3539 to £3834. With an increased income and a reduced expenditure on the year it was found possible to reduce the adverse balance of the previous year from £743 to £513. At the same time the committee, in presenting its report, pointed out that the new additions would necessarily entail increased expenditure and appeals, therefore, for increased support which must be forthcoming if the hospital is to proceed with its additional work. Not only must funds be found for the treatment of additional cases but also for increased sleeping accommodation for the nurses which must be provided before long.

Tuberculous Pigs.

We may congratulate ourselves upon the activity of our health department so far as tuberculosis in pigs is concerned, for the care it has exercised has been so great that the pig-dealers of Wexford have instigated the Member for South Wexford to make inquiry in Parliament concerning the matter. The pig-dealers complain that the authorities are more strict in Birmingham than in other places, and if that is so we can only recommend the example of Birmingham to other cities and towns if they are as desirous as we are to eradicate a dread disease. The pig-dealers claim that the animals destroyed are often those which they consider the best and they urge that when an animal is completely confiscated some compensation should be paid. They say that this is done in Germany, and although there seems to be little reason in the claim no doubt it will receive such consideration as it deserves.

Nov. 27th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

A New Coroner's Court.

UNTIL the provision now made for the coroner's court in the new and substantial fire-station buildings in London-road the accommodation for those who had to attend the court was not creditable to Manchester. The new court was formally opened by the Lord Mayor, Mr. J. H. Thewlis, a day or two before the close of his mayoralty. He reminded his audience that although the coroner was appointed by the city council, after his appointment he was practically an independent judicial officer. He bore testimony to the admirable manner in which Mr. E. A. Gibson had fulfilled the important duties of the office. In declaring the court open the Lord Mayor said he hoped that it would serve its "sad and serious purposes" adequately and well. In reply, Mr. Gibson thanked the Lord Mayor for the terms in which he had spoken of him. Among other matters he spoke of the difficulty as to the viewing of the body by the jury and of the steps now being taken "in the direction of trying to get legislation that would do away with that necessity." In his opinion viewing the body was of great importance and the abolition of it would interfere much with the efficiency of inquiries. He spoke also of the removal of bodies by hand ambulance as not acceptable to people in great sorrow, as they did not think it "quite as seemly as it might be." There had been criticism about the removal of bodies from private houses for post-mortem examination, but he had ordered it to be done because such an examination could not be made as it should be in a private house. Speaking of the large number of cases of suffocation of children, he thought some were due to carelessness, but in the majority of cases "they were purely accidental." He did not appear to advocate separate sleeping accommodation for all babies and said it was necessary that the mother should have the babe for feeding purposes, instancing two cases where children were suffocated in institutions in

Manchester during the short time when they were with their mothers while feeding. A woman heavy with sleep may easily drop off while suckling her child and so make suffocation not improbable, but this only strengthens the case for the crib rather than the mother's arms. He appeared to think that these accidents were not altogether preventable but that the cases of burning among children were preventable. They were just entering upon the season when there were a great many of these and he appealed to parents to "safeguard their children from fire by securing fireguards and not clothing their children in highly inflammable material." Anyone looking over the columns of the Manchester papers knows full well that there is ample justification for all, and even more than, Mr. Gibson said. These precautions would, no doubt, save many lives.

The Northern Hospital.

Saturday, Nov. 17th, was the last day of a bazaar beginning on Wednesday, the 14th, in aid of the funds of the Northern Hospital for Women and Children, better known by some perhaps under its old name of the Clinical Hospital. Like most charities supported by voluntary contributions it has found that the work of the hospital has increased without a corresponding increase in its annual income; nor has the condition of its funds allowed of the expansion long needed. It was hoped that a sum of £25,000 might be raised, but probably the miserable weather of the four days culminating in that of the Saturday reduced the takings considerably. However, the total proceeds were £8000 and a number of small sums have still to come in. In addition, Dr. J. J. Cox made the gratifying announcement that £17,000 had been promised to the Jubilee Fund. For the time being, therefore, the friends of the hospital will feel relieved and happy in the thought that its means of usefulness will be increased.

Ill—not Drunk.

Although the difficulty of distinguishing between some cases of cerebral hæmorrhage and drunkenness is well known, cases occur from time to time where it seems to be forgotten. This was illustrated at Heaton Norris recently. A cabman was arrested by the police late one night and was charged with being drunk while in charge of a horse and cab, driven to the police station, and placed in a cell. On the next morning he was found on the floor evidently ill, was taken to the workhouse, and died there. The diagnosis of the police was founded on his being helpless and smelling strongly of drink. The evidence of the medical officer at the workhouse was to the effect that there was partial right hemiplegia, that there seemed to be some cerebral irritation, and that the man was unconscious. A necropsy showed that death resulted from cerebral hæmorrhage. The medical officer said "it would be difficult to tell if the man smelt of drink whether he was helplessly drunk or whether he was unconscious from the hæmorrhage." The moral to be drawn from this and similar cases is pretty clear. It is that the responsibility for diagnosing between these conditions should not be left to those ignorant of all but a smattering of half knowledge—even in the case of those who have attended ambulance classes; that the police should be relieved from the responsibility; and that in all cases of unconsciousness, even though the smell of drink be strong, a medical man should at once be summoned.

Manchester Royal Infirmary.

A meeting of the elective committee of the Manchester Royal Infirmary (consisting of 30 representatives appointed by the trustees, ten by the board of management, and five by the University of Manchester) was held on Nov. 19th to appoint an honorary assistant physician to fill the vacancy caused by the promotion of Dr. Ernest S. Reynolds to the post of honorary physician in place of the late Dr. Thomas Harris. Mr. Alfred Simpson presided. Mr. E. N. Cunliffe, M.D., Ch.B. Vict., M.B., B.S. Lond., M.R.C.P. Lond., was elected.

Nov. 27th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Rhondda Isolation Hospital.

WHEN the Rhondda isolation hospital was erected seven years ago it was said by some of the inhabitants that the 32 beds provided would be ample for the needs of the district, where there is a population approaching 120,000. It was confidently predicted that it would be impossible to persuade persons suffering from infectious diseases to go to the hospital and that half the beds would be constantly empty. The reverse has, however, been the case and for many months in the year not only the wards but the administrative buildings have been seriously overcrowded. There is fortunately ample space on the site for extensions and the urban district council is to be congratulated upon the decision recently arrived at to erect a third pavilion for 16 patients and a pavilion to include four "pure" wards, two being for single beds. Attached to this pavilion will be discharging rooms. To the administrative block will be added 16 bedrooms, making a total of 27, and accommodation will be provided for a resident medical superintendent. The hospital is situated on the side of a hill and it has very wisely been decided to erect a separate small-pox hospital on the top of the hill some half a mile distant where there will be accommodation for 20 patients in two iron pavilions of unequal size. The earlier hospital cost about £14,000 and was paid for out of current rates. The extensions, together with the iron hospital, will cost about the same amount, and in this instance the borrowing powers of the council will not be resorted to.

Cardiff Infirmary.

The medical board of the Cardiff Infirmary has recommended that subscribers' letters of recommendation to patients should be abolished and the board of management has decided to give effect to a recommendation of a subcommittee to the effect that it is not desirable to abolish these letters at present, but that where the circumstances of the patient are otherwise suitable for treatment he should not be compelled to produce a letter. It is proposed to try this plan experimentally for a year.

Elementary Education and Medical Officers of Health.

At the meeting of the West of England and South Wales branch of the Incorporated Society of Medical Officers of Health, held at Newport on Nov. 15th, there was an important discussion upon the address which Dr. J. D. Jenkins, president of the branch, had delivered[1] on the subject of the medical inspection connected with public elementary schools. Dr. William Williams, medical officer of health to the Glamorgan county council, said that without doubt there would in the future be much more attention paid than formerly to the sanitary inspection of school buildings as well as to the medical inspection of the pupils. He was of opinion that these duties were inseparable and should be carried out by the same officers. The scheme which had suggested itself to him included the carrying out of the whole work under the supervision of the county medical officer of health, the actual work being done by medical men (assisted by others) who were qualified in public health and had a good knowledge of every branch of their work, especially of the diseases which children are liable to suffer from. Dr. Williams suggested also the appointment of school health visitors to whom could be allotted groups of schools. Amongst their duties could be the visiting of schools to confer with the teachers and the giving of advice to mothers and others as to the treatment of children suffering from skin diseases, verminous conditions, &c. Dr. D. S. Davies said that school medical inspection differed essentially in urban and rural districts. In large urban districts very little difficulty presented itself. An important question was whether the school medical officer should be attached to the health department. He considered that less friction would be likely to result if he were directly supervised by the medical officer of health and was of opinion that the medical officer of health should have the general control of the medical inspection of schools assisted by medical men and by nurses and health visitors. Dr. E. Walford and Mr. Ebenezer Davies urged that great caution should be observed lest sanitary authorities should be hurried into ill considered schemes. They both agreed that the medical officer of health should act as the medical adviser to the education committee and in large communities that he should be given medical assistance.

Medical Men and Local Administration.

Mr. Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., who has been chairman of the Bristol health committee since February, 1904, was on Nov. 20th unanimously re-elected to that post.—At the recent municipal elections Mr. George

[1] See THE LANCET, Oct. 27th, 1906, p. 1175.

Shepley Page, the public vaccinator for Bristol, was elected a member of the Bristol city council.

University College, Bristol.

The ordinary general meeting of the governors of Bristol University College was held on Nov. 21st. The report stated that the total number of students during the past year was 702. The ordinary expenditure amounted to £11,389 and this had exceeded the income by £216. It was stated that there was considerable difficulty in several departments to provide sufficient accommodation for the lecturer and students. It was decided to complete the affiliation of the Bristol Medical School with the College and to merge the finances of both, the College becoming responsible for the maintenance of the work.

Nov. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Badenoch District Fever Hospital.

The Badenoch District Fever Hospital, erected at a cost of about £5000 by the Third or Badenoch district committee of the Inverness-shire county council, has just been opened for the reception of patients. The building is meant to supply accommodation for fever patients in a district some 50 miles in extent. The site, which is 800 feet above sea level, has been granted at a nominal rent by the Mackintosh of Mackintosh. The hospital consists of a double block containing administration offices, nurses' and doctor's rooms, and four wards to accommodate 12 male and female patients, with a duty room between each pair of wards. The whole is fitted up with every modern convenience, sanitary and otherwise. The Local Government Board has been pressing for the erection of such a hospital in the district for over ten years.

Glasgow and the Prevention of Consumption.

The council of the Glasgow district branch of the National Association for the Prevention of Consumption in its annual report states that an important development in connexion with the treatment of consumption since the issue of its last report has been the establishing of a public dispensary where special advice and treatment may be received. By the kind permission and coöperation of the corporation health committee accommodation was procured in the sanitary chambers. The dispensary has more than justified its establishment and is proving a valuable agency not only for the obtaining of suitable cases for treatment in the sanatorium but also for advising and treating cases of a more acute and advanced type. It is to be regretted that for the many applicants who are found unsuitable for sanatorium treatment so little can in the meantime be done, as experience shows that on failing to be admitted to Bellefield Sanatorium their attendance at the dispensary immediately ceases and they return to their homes—too frequently small and overcrowded—a menace to the other occupants. The large number of this latter class, whose isolation and treatment would be a personal as well as a public advantage, points to the establishing of a hospital or home in the city as a matter of most pressing importance and necessity. During the year 95 patients have been admitted to the sanatorium at Bellefield, of whom 40 are reported as having had the disease arrested, 36 were improved, 11 were not improved, and two died. These encouraging results show an improvement on those of the preceding year.

Renfrewshire Combination Poorhouse.

The building committee of Renfrewshire Combination Poorhouse has just issued a report dealing with the accommodation provided in this institution. The report was suggested by the criticisms which have been passed on the committee owing to the building having been licensed for a much larger number of inmates.

Nov. 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Vice-Regal Commission on the Poor-law.

IT is evident that there will be considerable difference of opinion in Ireland with regard to the recommendations of this commission, and already the South Dublin board of guardians has raised the question as to the suggested State medical service by passing the following resolution on Nov. 20th:—

That the question of a State medical service is one which demands the careful attention of the Poor-law boards of Ireland, and we, the guardians of the South Dublin Union, do not at present consider it advisable to surrender the rights of the management of our hospital, or to surrender the privilege of selection and election of medical officers.

Another motion to the following effect was also brought forward—

That the guardians also disapprove of the suggestion to make the State medical service open to Irish-trained medical officers exclusively.

The New Belfast Infectious Diseases Hospital.

The new Purdysburn infectious diseases hospital was opened for the reception of cases of scarlet fever on Monday last, Nov. 26th. It is hoped that cases of typhoid fever, typhus fever, and diphtheria will, if they occur, be admitted early in December. In the old town hall a hospital office has been opened and the attendant, on receipt of a medical certificate—giving the name and address of a patient, the disease, and the recommendation for removal—will send the ambulance with a nurse to remove the person affected. In case of urgency the telephone can be used, but in this case, a certificate must be handed to the nurse in charge of the ambulance. A question requiring great judgment is to come up for future consideration—that is, the admission of paying patients at this infectious diseases hospital.

County Antrim Infirmary.

Mr. H. M. Barbour is building at his own expense a sterilising chamber close to the operating theatre of the County Antrim Infirmary at Lisburn. The same gentleman recently put lockers into the wards at an expense of £120 and he has also given several donations. During the past year 209 male and 139 female patients were admitted to the hospital. There were 17 deaths and 293 accident cases.

Michael O'Sullivan, M.D., R.U.I., F.R.C.S. Irel.

The death of Dr. O'Sullivan, formerly of 14, Gardiner's-place, Dublin, took place on Nov. 18th at the residence of his sister. He filled the position of anæsthetist and surgical registrar at the Mater Misericordiæ Hospital for more than nine years and was a most efficient and diligent officer. He took much interest in the methods of administering nitrous oxide with ether, ether alone, and chloroform occasionally. His work was most successful in that department, for he anæsthetised more than 6000 patients without a single death. He was physician to the Children's Hospital, Temple-street, and was acquiring a large practice in his district when, unhappily, he was attacked with disseminated sclerosis from which he died. He was a very religious man and very charitable but so quiet and retiring that the admirable work which he did was never fully appreciated.

Nov. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Death from Injections of Gray Oil.

AT a meeting of the Société Médicale des Hôpitaux held on Nov. 16th M. Letulle gave particulars of a case in which injections of gray oil were followed by death and an interesting discussion took place. The patient was a woman who, while pregnant, received 21 injections of the oil in the course of two months. The punctures had evidently been made with great care, because no trace of them could be found in the region of the buttocks where the injections were given. The liver showed no pathological change beyond congestion, but the kidneys presented evidence of parenchymatous nephritis. The patient's teeth were in a very bad state. It was probable that if they had been in a normal condition, or if proper care had been taken of them, the stomatitis would either not have occurred or would not have been so serious. M. Gaucher said that in his opinion too much use was made of injections of gray oil and that the great majority of cases of syphilis ought to be treated with pills. M. Rénaut said that he had for a long time noted two complications associated with injections of gray oil. These were, firstly, a severe form of stomatitis occurring at a late stage, even six weeks after an injection given under the most favourable conditions; and, secondly, pulmonary embolism, which

might prove fatal. M. Le Noir said that he had already spoken against the use of injections of gray oil and that he was at the present time making observations which seemed to show that considerable lesions of the liver accompanied mercurial poisoning by gray oil. M. Balzer said that in his opinion these injections were not absolutely contra-indicated in M. Letulle's case; the great mistake appeared to have been twofold—namely, the injection of insoluble salts of mercury during pregnancy, and especially the too frequent repetition of the injections. M. Hirtz said that at the Lourcine Hospital he had given 90 injections of gray oil without a single accident, but he had nevertheless abandoned this mode of treatment. M. Gaucher said that M. Letulle's case only showed that the injections had been improperly given but proved nothing against the use of gray oil. He thought that these injections ought to be given by medical men accustomed to that kind of work. M. Danlos said that injections of gray oil must be considered as an exceptional method of treatment. M. Balzer, in concluding the discussion, said that it was the patients themselves who asked for the injections after they had experienced the dyspeptic troubles caused by pills.

Treatment of Stage Fright.

At a recent meeting of the Hypnological and Psychological Society M. Paul Farez described three cases of stage fright (*trac*) successfully treated by suggestion. Two of the patients took part in the last competition at the Conservatoire. In all the numerous cases of stage fright in which he has obtained a good result the symptom of fear has been associated with some bodily failing, such as respiratory spasm, cardiac hypertrophy, cardiac irritability, bradycardia, arterial hypertension, or peripheral vaso-constriction. These conditions had an important bearing on stage fright; they maintained, aggravated, and prolonged it; and they were, moreover, an obstacle to the full and prompt success of treatment by suggestion. Suggestion was unquestionably the proper treatment for stage fright, but recovery was hastened by the use of suitable remedies for the relief of the above-mentioned physical symptoms either before or during the psychological treatment. This converging psycho-somatic action is capable of bringing about rapid, easy, and permanent recovery.

Exophthalmic Goitre following Intense Emotion.

At a meeting of the Société Médicale des Hôpitaux held on Nov. 9th M. Remlinger described the case of a Turkish soldier who was suddenly attacked by a vicious dog and four or five days afterwards suffered from painful swelling of the thyroid body, fits of palpitation and shortness of breath, tachycardia with a pulse-rate of 140 or 160, and general tremulousness which was especially marked in the upper limbs and the finger tips—in short, all the symptoms of acute Basedow's disease. The man did not present any hysterical or neurasthenic stigmata. It therefore appears that intense emotion—fear in the present instance—may of itself give rise to exophthalmic goitre.

Convulsions after Swallowing a Caterpillar.

At a meeting of the Pediatric Society, held on Nov. 20th, M. Variot related, on behalf of M. Dufour of Fécamp, the case of a child who was attacked by convulsions after swallowing a caterpillar. The child was made to vomit by being given salt and water to drink and the caterpillar was brought up alive. After this the convulsions ceased. In this case the child himself told his parents that he had swallowed the caterpillar. In another case of a child with convulsions M. Dufour gave calomel and santonin in the belief that ascarides were probably the cause of the trouble. Nothing was found in the stools but a dead caterpillar. In contrast with these two cases M. Dufour cited the case of a child who after treatment voided two lumps of ascarides, amounting in all to 480 worms. No convulsions, however, had occurred.

Nov. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Ophthalmia Electrica.

AT a recent meeting of the Berlin Medical Society Dr. Cnellitzer described a series of cases of "ophthalmia electrica" caused by a brief exposure to the glare of iron melted by electricity at an engine factory in Berlin. The current employed had a strength of 450 ampères, at a tension of 65 volts, and when the circuit was closed by bringing the iron into contact with a carbon rod an enormous arc of light of about 50,000 candle-power was produced. As workmen had to pass near the place where this was going on they were warned by one of the engineers not to loiter at that particular place. On the following day, however, as many as 12 of the men employed in the factory sought medical advice, all complaining of the same symptoms—namely, pain in the eyes, profuse lacrymation, spasm of the eyelids, and headache. On examination of the eyes hyperæmia and swelling of the conjunctiva were found and the ophthalmoscope showed that there was hyperæmia of the papilla. The patients declared that they had passed the place where the electrical melting was going on at a distance of about five or six metres and that they had obeyed the order of the engineer not to stay in the neighbourhood. It therefore appears that ophthalmia electrica may be originated by a very brief exposure to this special form of luminosity. Such cases have hitherto been observed only in workmen who had themselves been manipulating electric light apparatus. As to the cause of the ophthalmia the writer of the paper was of opinion that it was brought out by the ultra-violet rays.

Pneumonia after Inhalation of Chloroform.

Dr. von Lichtenberg, an assistant to Professor Czerny of Heidelberg, writing to the *Münchener Medicinische Wochenschrift*, describes a series of experiments which he has carried out with a view to ascertain the genesis of pneumonia after laparotomy. It has been doubted whether the inhalation of an anæsthetic was really the cause of this affection, as the late Professor Mikulicz stated that pneumonia occurred more frequently after local anæsthesia than after general anæsthesia by chloroform. Dr. von Lichtenberg put 22 rabbits under chloroform by aid of the Draeger-Roth apparatus, which allows oxygen and air together with chloroform to be administered to the animal. In the experiments the narcosis was prolonged for a period which never occurs in practice—namely, from three to seven and a half hours. Four of the animals were purposely chloroformed to death; the others were killed by electricity or by venesection. The necropsies showed atelectasis of the lungs, the extent of which differed according to the quantity of chloroform administered and to the duration of the anæsthesia. The lesions of the lungs were the same whether chloroform was administered together with oxygen or with compressed air. In addition to the atelectasis there was evidence of emphysema, especially after the use of chloroform combined with compressed air. In animals killed after 48 hours typical broncho-pneumonia had developed. Dr. von Lichtenberg concluded that chloroform anæsthesia produced grave alteration within the lungs which led to pneumonia. The direct action of the chloroform on the alveoli of the lungs made the epithelium swell and become detached, so that the bronchioles were obstructed. This was the cause of atelectasis, one consequence of which was a liability to pneumonia. Moreover, the excessive administration of oxygen made the respiration superficial and the aeration of the lungs insufficient. In fact atelectasis was found in an animal to which oxygen only had been administered.

Vocal Rest in the Treatment of Laryngeal Tuberculosis.

On the occasion of the seventieth anniversary of the birth of its President, Professor Fraenkel, the Berlin Laryngological Society held a meeting at which Sir Felix Semon read a paper on the Observance of Complete Silence as a Method of Treatment in Tuberculosis of the Larynx. In this paper, which has been published in the *Berliner Klinische Wochenschrift*, he said that rest of the larynx had been recommended as early as 1885 by Professor Schmidt of Frankfort who made a distinction between absolute rest of the larynx as produced by tracheotomy and rest of the vocal cords. Sir Felix Semon has also come to the opinion that the observance of silence, though not an absolute remedy for laryngeal tuberculosis, is highly efficacious in many cases. He has, however, found that patients in their own homes were unable to follow the prescription and to abstain totally from speaking, so that he only recommended them to spare their voice as much as possible. He maintained that one of the great advantages of sanatorium treatment, of which Professor Fraenkel was a strenuous advocate, was that the patients might there totally abstain from using their voices. At home the friends and relatives induced the patients to talk, whereas in the sanatorium they might either

be isolated or put in the company of reasonable patients who would not encourage them to over-exert their voices. He has had excellent results, especially in cases of acute irritation and of catarrhal congestion, whilst cases showing ulcerations and perichondritis were, of course, not influenced. He has seen the irritation and infiltration disappear and isolated ulcers heal completely. Of course, patience is necessary as a rather long time is required for success.

Phosphorus in Matches.

At a meeting of the Berlin Society for Social Medicine Professor Somerfeld read a paper on the Injurious Effects of White Phosphorus. He said that the official statistical returns relative to the frequency of phosphorus necrosis were apparently not trustworthy. In Germany every year only a few cases were reported, and in England during the period from 1900 to 1903 only nine cases, of which four had a fatal issue. Since the conference held at Berne in 1905 only three cases are recorded. An inquiry carried out by Dr. Taleky in Bohemia showed, however, the existence of 46 cases in eight factories, and 31 were stated to have occurred in the preceding years, whilst the official returns only give 19 cases. Hygienic measures to prevent the inhalation of phosphorus vapours in factories have proved useless, and at the conference at Berne in 1905 the majority of the European Governments agreed to prohibit the use of white phosphorus in the manufacture of matches. This agreement, however, was to take place only from Jan. 1st, 1911, and under the condition that the United States and Japan should agree to the recommendations of the conference. England has not agreed to the total prohibition of white phosphorus, alleging that the factory and workshop regulations were sufficient to combat the disease. Various substitutes for ordinary phosphorus have been tried in the match factories, such as phosphorus sesquisulphide, P_2S_3, which was largely used in France and Switzerland. It was, however, doubtful whether this substance was really innocuous. A new preparation has recently been discovered by Dr. Gaus which is termed cuprobariumpolythionate. Workmen engaged in the manufacture of matches tipped with this substance were not liable to suffer in health as no unwholesome material was developed in the form of either vapour or dust. It is the duty of the Governments concerned to prohibit white phosphorus, which in the interest of the workmen must be replaced by other substances.

Nov. 26th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Vital Statistics of Vienna.

A short time ago the Registrar-General published the results of the records kept in all hospitals and a good idea of the medical work accomplished there may be gained by the perusal of the book. A constant though not very remarkable decline is manifest in all infectious diseases, especially measles, whooping-cough, tuberculosis, scarlet fever, and typhoid fever; no case of small-pox was recorded. Diphtheria is completely under control; its mortality does not exceed 4 per cent. in the hospitals but is slightly higher in private practice. Cancer shows an increase which is probably due either to improved diagnosis or to more frequent post-mortem examinations. The mortality of the hospital patients is on an average from 8 to 9 per cent. It must be kept in mind that only grave cases are admitted. There was only one day during the year 1905 that no patient died in the Vienna hospitals. The general mortality of the population of Vienna is now 18·7 per 1000; the mortality of children under one year, which is now 106 per 1000, has fallen from 127 per 1000 within the last four years to its present level. This gratifying result is mostly due to improved methods of instructing women as to the care of their children, to the distribution of wholesome infants' milk amongst the poorer classes of the population, and to the increased habit of breast-feeding. The number of medical men holding hospital appointments is 482—a considerable proportion as compared with the 2800 private practitioners. The aggregate number of out-patients treated in the several departments of all the hospitals was 1,300,000. The average number of births per week was 870, and the increase of the population as estimated by the excess of births over deaths is 2¼ per cent., whilst it is actually only 1¼ per cent. The difference must be accounted for by emigration and travelling.

Nov. 24th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Burnside Lying-in Hospital, Toronto.

Dr. Adam Wright, professor of obstetrics in the Medical Faculty of the University of Toronto, and accoucheur-in chief to the Burnside lying-in department of the Toronto General Hospital, has recently formulated a set of rules for the guidance of those interested in this branch of medical practice in that institution. Some points in the procedure may prove interesting and instructive. The administration of an ante-partum douche has recently been revived after the lapse of many years; none of any kind is used after labour unless specially indicated. The Kelly pad is used only to a limited extent. The vulvar pad is ordered to be changed as often as necessary. A cathartic is administered earlier than it was a few years ago. The height of the fundus uteri is noted daily and the involution line is carefully noted on the charts. Alcohol has been discarded in cleansing the hands of the obstetrician and the genitalia. The antiseptic used to a large extent is bichloride of mercury; lysol has also been used for a number of years. In connexion with the use of antiseptics Professor Amyot made for the institution a series of experiments last winter and found that lysol and cresoline, the latter being only used to a limited extent, had strong germicidal properties. As to the use of forceps the rule is that after dilatation of the os the forceps should be applied within three hours in primiparæ and within two hours in multiparæ if nature has not completed the labour. The attending obstetrician may, and the intern must, wear indiarubber gloves in making vaginal examinations. These examinations are as few as possible. A cathartic is given on the evening of the day after labour. In addition to the regular means employed in cases of eclampsia a hypodermic injection of half a grain of morphine is administered at once, then one of a quarter of a grain in half an hour, and a third in one hour if the convulsions are not controlled in the meantime. There is no order to bleed. Abdominal palpation is practised for position and presentation and external measurements are made by the pelvimeter. Patients are allowed to sit up and void urine on and after the second day, unless there is a perineorrhaphy. They are allowed to sit up in bed on and after the fifth day if they desire. They are not allowed to get out of bed until the tenth day and not then if the fundus is still above the pubes.

Montreal Medico-Chirurgical Society.

The first regular meeting of the Montreal Medico-Chirurgical Society for the session 1906–07 took the form of a smoking concert and was held on Oct. 5th. The following are the officers of the society for the year:—President, Dr. F. G. Finley; vice-president, Dr. Wesley Mills; treasurer, Dr. A. T. Bazin; secretary, Dr. D. H. Gordon; and trustees, Dr. James Bell, Dr. H. S. Birkett, and Dr. James M. Jack.

Toronto Clinical Society.

The first meeting of the fifteenth session of the Toronto Clinical Society was held on Oct. 10th. A paper was contributed by Dr. J. F. W. Ross on the Treatment of Septic Peritonitis. The following officers have charge for the year 1906–07:—President, Dr. H. B. Anderson; vice-president, Dr. Herbert A. Bruce; recording secretary, Dr. George Elliott; corresponding secretary, Dr. W. J. McCollum; treasurer, Dr. Geoffrey Boyd; executive, Dr. R. J. Dwyer, Dr. Charles Trow, Dr. W. Goldie, Dr. D. J. Gibb Wishart, and Dr. Kennedy McIlwraith.

The Province of Quebec College of Physicians and Surgeons.

The College of Physicians and Surgeons of Quebec held its semi-annual meeting on Sept. 26th. The financial statement submitted was very satisfactory, the total receipts for the year being $8,525 and the disbursements, $5,126. There are now 1838 physicians subscribed on the register of the province, of whom 1602 are in actual practice in the province. With regard to the question of a five year course the College decided to postpone asking the legislature to enact legislation.

Medical Reciprocity between Quebec and Great Britain.

Quebec is the second province of the Dominion of Canada, Nova Scotia having been the first, to seek reciprocity with Great Britain as provided for in General Laurie's Amendment to the British Medical Act. At the semi-annual meeting

held on Sept. 26th the following resolutions were adopted and a proviso added to the latter:—1. That the College of Physicians and Surgeons of the Province of Quebec beg the Legislature of the Province of Quebec at its coming meeting to send a request to His Majesty's Privy Council demanding the application of the Medical Act of 1886 and the Amendments made in 1905 to the Province of Quebec. 2. That upon a favourable answer from the Privy Council the College of Physicians and Surgeons of the Province of Quebec enter upon the necessary negotiations with the General Medical Council of Great Britain in order to assure the establishment of reciprocity between Great Britain and the Province of Quebec. The proviso reads as follows: "Provided that those who, having obtained the British licence and are demanding the licence of the College of Physicians and Surgeons of the Province of Quebec, shall prior to their British registration have filled all requirements of our (the Province of Quebec) Medical Act in regard to obtaining of our licence." It will be seen that this proviso is intended to prevent "irregulars" from Quebec going to England, returning with a British licence, and demanding registration with the College of Quebec.

The Prevention of Tuberculosis.

The Government of the Province of Ontario is endeavouring to educate the people to realise the dangers of tuberculosis and is, moreover, setting forth the best means for checking the spread of that dread disease. An arrangement has been made to secure a duplicate of the exhibition which was displayed in Toronto during the time of the meeting of the British Medical Association. This is being made with the National Association for the Study and Prevention of Tuberculosis of New York. In addition this will be supplemented by materials from Europe; and the exhibit will become the permanent property of the province. It is the intention of the Government to display this in every city, town, and village of any size throughout the province at stated dates. Some competent person will be in charge of the exhibit and will deliver lectures on the subject and explain the use of all the appliances.

Leprosy in Canada.

Dr. F. Montizambert, Director-General of Public Health in Canada, has been in British Columbia for the past month on business connected with the leprosy station at D'Arcy Island, and in order to calm the fear of infection which has arisen amongst the community he has given them some information about the only other leprosy hospital in Canada—namely, the one which is in the village of Tracadie, New Brunswick. He said that the station on D'Arcy Island in British Columbia is 15 miles away from the capital, Victoria, whereas the lazaretto at Tracadie is situated right in the centre of that village, directly opposite the parish church. The sisters of the Order of the Black Nuns of Montreal look after the 15 or 16 inmates and among them there has never been a case of leprosy. Tourists visit the Tracadie lazaretto in great numbers. There are two communities in the Dominion of Canada where lepers are at large—namely, in Gloucester county near Tracadie and in Cape Breton. The latter was first infected by two sailors 100 years ago and sporadic cases have arisen from time to time since. Every year four or five cases are sent to the lazaretto. Dr. Montizambert further stated that the Dominion Government had no intention of removing the lepers from D'Arcy Island to Albert Head—the report was erroneous.

Toronto, Nov. 14th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Patent Medicines and Foods.

THE Minister of Customs, in reply to a question in the House of Representatives, stated that the following regulation had been made, under the provisions of the Commerce Act, and would come into force on Jan. 1st, 1907:—

In the case of medicines prepared ready for use, and containing 10 per cent. or more of ethyl alcohol, if the average dose recommended exceeds one teaspoonful (60 minims), the trade description shall set out the proportion or quantity of proof spirit in the medicine. In the case of medicines prepared ready for use, and containing any of the following drugs (or the salts and derivatives thereof)—viz.: Opium, morphine, cocaine, heroin, stramonium, nux vomica, cannabis indica, bromides, sulphonal, trional, veronal, paraldehyde, or any synthetic hypnotic substance, phenazonum, phenacetinum, or acetanilidum, or any allied synthetic substance, chloral hydrate, belladonna, cotton root, ergot, or any abortifacient, the trade description shall set out the names of all such drugs so contained.

With regard to infantile and artificial foods, the Commerce Act regulations require a trade description to be applied stating a true description of the goods and the country or place of origin.—At the Prahran court a man was charged with a breach of the Licensing Acts in having sold liquor without a licence. The alleged "liquor" was a patent medicine known as "Peruna," which on analysis was found to contain 45 8 per cent of proof spirit. The defendant said he did not know that "Peruna" contained alcohol. The case was adjourned.

Food Standards.

At its meeting on Oct. 1st the Food Standards Committee made further recommendations. It was decided that one grain of sulphurous acid or sulphites per pint, or one grain of salicylic acid per pint, should be allowed in beers paying excise duty provided that the alcoholic strength of such beers did not exceed 4 per cent. In connexion with beer the standard recognises the unavoidable presence of not more than two grains to the gallon of sulphurous acid or sulphites, which will have to be declared. In view of the difficulty of brewing a temperance ale, so called, of sufficient alcoholic strength and sweetening to suit the public taste without the addition of saccharin, it was resolved to recognise in the meantime a saccharinised temperance beer to contain not more than two grains of saccharin to the gallon, its presence to be declared. It was resolved to standardise malt extracts in two varieties. The first was whole malt extract, or digestive or diastasic, containing at least 70 per cent. of total solids and derived wholly from malt, without foreign substances, and with digestive power sufficient to convert two and a half times its weight of starch in 30 minutes at a temperature of 40° C. The second variety, known as commercial maltose, or commercial or baker's malt extract, was standardised so that it should contain not less than 70 per cent. of malt extractives, the addition of foreign substances being prohibited. The standard for mustard was fixed so that it should contain not more than 2·5 per cent. of starch or more than 8 per cent. of total ash.

The University of Melbourne.

The annual report of the bacteriological laboratory at the University of Melbourne shows that the number of examinations made for the Board of Health in 1905 was 3454, as against 2873 in 1904. Experiments were conducted in relation to destruction of rats by means of the bacillus of Danysz, obtained from three different sources. Over 40 rats were used, but attempts to disseminate disease by natural means amongst the experimental animals were not very successful.

Medical Reciprocity.

As previously stated, the Medical Act Amendment Bill now before the Legislative Assembly of Victoria provides for reciprocity of admission to practice similar to the provisions of the Imperial Act and objections to this provision have been made. The Faculty of Medicine of the University of Melbourne has written to the Chief Secretary replying to the objectors, emphasising that the Bill does not go beyond the Imperial Act and pointing out that the exclusion of American practitioners would not exclude homœopaths from Victoria any more than the Imperial Act interferes with them in Great Britain, where homœopathic hospitals exist.—In the Legislative Assembly of New South Wales, Dr. R. Arthur introduced a Bill to amend the Medical Practitioners Act, with the view of establishing reciprocity. The Bill proposed that medical practitioners should not be registered in New South Wales unless the countries from which they came received on equal terms graduates of the University of Sydney. The Bill was opposed by the leader of the labour party on the curious ground that it would grant "preference to unionists" of a dangerous character. Other members also spoke against it and the Bill lapsed under the rule preventing private members' business being dealt with after 6 o'clock.

The Registration of Opticians.

A Bill to register sight-testing opticians was introduced into the Legislative Council of New South Wales on Sept. 27th. Its object was said to be to insure the competency of those engaged in sight-testing and to raise their status. It was strongly opposed as unnecessary and the motion for the second reading was negatived by 17 to 5.

Infantile Mortality.

A deputation from the Child Study Association waited recently on the Chief Secretary of New South Wales to ask for monetary assistance in carrying out its work. It was stated that over 4400 children aged 12 months and under and 16,000 under five years of age died annually in the State, and that the majority died from improper feeding, chiefly owing to ignorance and bad milk-supply. The deputation asked that the Government should insist on inspectors and analysts paying greater attention to the quality of children's food. The association gave instruction to mothers and treated children at its institution. The Chief Secretary was sympathetic and promised to see what could be done.

Action against a Dentist.

Mr. A. T. H. Pittar, dentist, of Sydney, was defendant in an action to recover £1000 for injuries alleged to have been caused by his negligence. The plaintiff had some teeth extracted and subsequently suffered from suppuration in the face and orbit, ending in the loss of the left eye, and it was alleged that the forceps used had not been sterilised. Evidence was given for the defence showing that the instruments used were sterilised, and that there were an alveolar abscess and cellulitis present when the teeth were extracted. A verdict was given for the defendant.

Proposed Amalgamation of Medical Societies in Victoria.

The two main medical societies in Victoria are the Medical Society of Victoria, which has existed for 50 years, and the Victorian branch of the British Medical Association. At various times proposals have been made for their amalgamation, but they have fallen through. One of the difficulties has been the fact that the Medical Society of Victoria has a block of land on which a hall and library are built, and under the grant this land would revert to the Crown if the society ceased to exist. In the annual address of the retiring president of the Medical Society amalgamation was once more proposed and a scheme outlined. Since then a committee has been formulating a mode of union and has apparently evolved a successful solution of the problem. Instead of amalgamating, the two societies are to be associated by each adopting exactly the same rules, one of which is that all members of the one society "shall be and shall be deemed to be members of the other, and any member who refuses to be and to continue to be a member of one shall be removed from the list of members of the other." The trustees and officers shall be the same for both societies and the meetings and elections will be held conjointly. Practically the society will be the local branch of the British Medical Association, but still the Medical Society will legally continue. The common rules have been provisionally adopted by both societies, but the whole scheme is subject to the approval of the Council of the British Medical Association in England. The local organ of the society is the *Intercolonial Medical Journal*, while that of the branch is the *Australasian Medical Gazette*. Which is to be the organ of the combined society has not been yet determined.

Oct. 30th.

*** Our correspondent's letter of date Oct. 16th, published in our issue of Nov. 24th, contained a reference to the use of the Danysz virus for destroying rabbits and to the experimental work in progress on Broughton Island. Our readers will have noticed that Reuter's agent telegraphed last week that several of the laboratory staff have fallen ill on Broughton Island but no precise details are given.—ED. L.

Obituary.

EDMUND SYMES-THOMPSON, M.D. LOND., F.R.C.P. LOND.

THE death is announced, in his sixty-ninth year, of Edmund Symes-Thompson, consulting physician to the Hospital for Consumption and Diseases of the Chest, Brompton. Dr. Syme-Thompson was born in 1837 and was the third son of the late Theophilus Thompson, M.D., F.R.S., who was one of the founders of the Brompton Hospital for Consumption. He was educated at St. Paul's School, King's College, and King's College Hospital. He entered the last-named institution in 1856, being clinical clerk to Dr. Todd and Dr. Budd and dresser to Sir W. Bowman and Mr. H. Lee. After serving as house physician he was in 1860 elected assistant physician, a post which he resigned in 1865 in order to devote himself entirely to a study of diseases of the chest. He graduated as M.D. Lond. in 1860, having taken his M.B. in the previous year, and for several years he was a member of the committee of convocation of the University. In 1862 he became a Member of the Royal College of Physicians of London and was elected Fellow in 1868. In 1863 he was elected assistant physician to the Hospital for Consumption and Diseases of the Chest, Brompton, and in 1871 full physician, a post which he held until 1889, when he was made consulting physician. In 1867 he was made Gresham professor of medicine and also physician to the Ventnor College Hospital. He was also physician to many charitable institutions and was from 1893 to 1902 Provost of the Guild of St. Luke. He leaves a widow, four sons, and two daughters, the eldest son being in the medical profession.

Among his literary works were an issue of his father's lectures on "Pulmonary Consumption," with additional chapters by himself, published in 1863, and "Influenza, an Historical Survey," published in 1890. He also devoted much attention to the influence of climate on disease and his knowledge of various health resorts was extensive. He had held the position of President of the Medical Society of London and of the Balneological and Climatological Society. Dr. Symes-Thompson possessed a charming personality and those who knew him well will mourn the loss of a true and steadfast friend. He was never happier than when rendering aid and advice to one who needed it. His large sympathies with others of diverse views will be remembered by many. He was full of physical and mental energy and his conversational powers and pleasing manners procured for him a large circle of friends.

His remains were laid to rest at Finmere Church, Buckinghamshire. The first part of the Burial Office was said at St. Peter's, Vere-street, by the Rev. Canon Page Roberts. Amongst those present in addition to members of the family were: Sir R. Douglas Powell, Sir Dyce Duckworth, Dr. Robert Maguire, representing the medical staff of the Brompton Hospital; Dr. Frederick T. Roberts, Dr. C. Theodore Williams, Dr. T. D Acland, Dr. Percy Kidd, Dr. William Ewart, Mr. Stanley Boyd, Dr. F. Bagshawe (St. Leonards), Dr. Francis H. Hawkins (Reading), Dr. S. Russell Wells, and Dr. F. J. Wethered. Mr. H. N. Russell (chairman), Mr. W. P. Phelps (actuary), and Mr. Powell and Mr. Dimond (directors) represented the Equity and Law Life Assurance Society, to which Dr. Symes-Thompson had acted as principal medical officer for many years.

ROBERT HAMILTON BELL, M.A., M.B., B.C. CANTAB., M.R.C.P. LOND., F.R.C.S. ENG.

IT was with sincere sorrow and regret that his many friends heard of the death of Dr. R. Hamilton Bell which took place after an illness of but a few days' duration on Oct. 29th. He had appeared to be in the best of health although possibly a little overworked, but a slight attack of laryngitis was complicated by an attack of pneumonia of a virulent type and the involvement of both lungs was followed by death from cardiac failure after an illness of only three days.

Robert Hamilton Bell was born in 1871 and proceeded to Trinity College, Cambridge, in 1891, where he took his B.A. degree with honours in the second class of the Natural Science Tripos in the year 1894. From Trinity College he proceeded to St. Thomas's Hospital for the latter half of his medical course and took the degrees of M.B., B.C. Cantab., in 1898. Having determined to practise obstetric medicine he became a candidate for, and was appointed to, the post of physician to out-patients at the Samaritan Free Hospital in 1901. His appointment to this post was made in circumstances which placed him in a somewhat difficult position through no fault of his own. This circumstance, however, enabled him to show that thus early in his career he was possessed of both judgment and tact and he filled a difficult position with credit to himself and to those who had chosen him for the appointment. In the same year (1901) he became a Member of the Royal College of Physicians of London, and recognising the great importance of a sound surgical training in both obstetric medicine and gynæcology he passed the examination for the Fellowship of the Royal College of Surgeons of England in the following year. Soon after completing his term of office as house physician and senior and junior obstetric house physician at

St. Thomas's Hospital Dr. Bell obtained the important post of obstetric tutor and registrar in the medical school, and so had his foot on what is usually considered the first rung of the ladder in the career of an obstetric physician. In 1905 he was appointed obstetric physician with charge of out-patients to the Great Northern Central Hospital, and in 1906 he was made assistant physician to the British Lying-in Hospital. That Dr. Bell made a good use of his opportunities is shown by the number of important contributions which he made to the St. Thomas's Hospital Reports, the Transactions of the Obstetrical Society of London, and to the *Journal of Obstetrics and Gynæcology of the British Empire*. To this journal he was a constant contributor of abstracts of papers published in the foreign medical journals.

Dr. Bell was a good example of the best type of the men who fill the junior posts at our large London hospitals. He took a keen interest in outdoor games and was a man of much culture and of many resources apart from his strictly professional work. He was possessed of a personality of peculiar charm and all who knew him speedily came under its fascination. Devoted to his work, painstaking and punctual in the performance of his duties however irksome they might be, he was a fine example to his fellow workers and to the students of his hospital. Judicious in his decisions and cautious in his judgment, he was possessed of a clinical acumen which gave abundant proof of the manner in which he performed his daily duties in the wards and the out-patient departments. He had already succeeded in establishing for himself a position in private practice, and as he seemed to be the possessor of rude health and of a robust constitution the suddenness of his death at so early an age was all the more tragic. He was one of the best of friends, sympathetic and considerate in his dealings with patients, and endowed with the saving grace of humour. Indeed, the future seemed to have in store for him much prosperity and happiness, but it was not to be. His example and memory will be held in affectionate regard by his colleagues and the students of his school, and his whole-hearted enthusiasm for his hospital and medical school will not soon be forgotten.

Dr. Bell married three years ago the daughter of the late Sir William Long, and to this lady and her infant child we convey our sincere sympathy.

JOHN GEORGE DOUGLAS KERR, M.B., C.M. GLASG., J.P.

Dr. Kerr, who died at his residence at Bath on Nov. 14th at the age of 49 years, was a well-known medical practitioner and a distinguished yachtsman. Though born in Australia he was of Scotch descent and received his medical education at the University of Glasgow, where he distinguished himself by winning the gold medal in surgery in 1878. Two years later he graduated M.B., C.M., and after acting for a short period as house surgeon to the Glasgow Western Infirmary he went to Bath as partner to the late Mr. Stockwell. Here he took up the study of the Bath waters and published a popular guide to their use, and became widely known to the public as an authority upon the thermal and balneological treatment of disease. He was the author of "Rheumatoid Arthritis as Distinct from Rheumatism and Gout," "The Nauheim Treatment," and "Treatment of Diseases by Heat and Light." He contributed several papers to the medical press also, but his literary work was essentially addressed to the public. Among the professional appointments which he held were those of consulting medical officer to the Home for Indigent Ladies at Bournemouth, honorary referee to the Royal National Hospital for Consumption at Ventnor, and honorary physician and gynæcologist to the Hospital for Women at Bath. He was also at different times the president of the British Balneological and Climatological Society, a position which he owed to a widespread reputation for knowledge of the possibilities of the thermal treatment of disease. His methodical mind, his untiring energy, his whole-hearted interest in those who consulted him, soon gained for him the confidence and the appreciation of a large public who visited Bath again and again to seek his aid. On this point we may quote a letter which we have received from one of his most intimate friends. "But it was something more than mere confidence in Dr. Kerr's opinion," he writes, "and the value of his advice that so rapidly increased his large connexion and held it together with no uncertain a hand. Hundreds of letters have been received since his death bearing eloquent testimony to the real affectionate esteem in which he was held by all his patients and let one into the secret of his great success. For this wonderful personality and popularity he has had to pay the penalty, and there can be no doubt that the long hours of strenuous work for many months of the year told upon what was really not a strong constitution, and to-day his sorrowing relatives, his numerous friends, and the city of Bath mourn the loss of one whose life's record, short as that useful life has been, will ever be held in affectionate remembrance."

Dr. Kerr was a great sportsman. Deer-stalking and mountain climbing were at one time his favourite recreations, and he had ascended all the highest peaks in Switzerland and the Austrian Tyrol. In later years he became devoted to yachting and after some cruising in a well-known old racer, *The Raven*, he commissioned W. Fife to build him the *Valdora*, a fine racing yawl of 106 tons, and went in for first-class handicap racing. In the first year of owning her she won for him 23 flags, and in 1904 in record time she won the German Emperor's cup in the international race from Dover to Heligoland and 20 other prizes. In 1905 she was heavily handicapped and met also with unavoidable mishaps, only gaining 13 flags, but among these was the Royal Albert cup, which she had lost by only a few seconds the year before. In addition to his wide reputation as a physician and a sportsman Dr. Kerr had another claim upon Bath—he was an energetic citizen. Sixteen years ago he was elected to the town council and he was a justice of the peace for the county. He also at one time held a commission in the North Somerset Yeomanry as surgeon. It will be readily understood that the loss of such a man has been very generally felt.

It was in the autumn of last year that a sharp attack of influenza showed its influence upon a heart which had, perhaps, been long overworked by a strenuous life. But the patient did not succumb without a struggle. Directly he was well enough to travel he went to the Canary Islands but before he had crossed the bay a cardiac attack nearly proved fatal to him. For some months he remained at Orotava and then in the latter part of this spring he went to Nauheim and for six weeks placed himself under the routine treatment of the place. Here he so improved that after some weeks in Switzerland he returned home in the latter part of September and resumed his work in Bath. His patients and his numerous friends were hoping that his recovery would be permanent, when on Nov. 2nd he was again laid low by another attack of influenza and in spite of all medical intervention died after 12 days' illness. He was attended throughout his illness by his friend, Dr. E. J. Cave, and by his two partners.

WILLIAM LLOYD ANDRIEZEN, M.D. LOND.

Dr. William Lloyd Andriezen, whose death we briefly announced in our issue of Nov. 24th at the early age of 36 years, was one of the most brilliant of the younger group of neurologists. He received his medical education at University College Hospital, obtaining a medical entrance exhibition in 1887, and also winning many medals in his further career as a student. He graduated as M.B of the University of London in 1891, and having always taken special interest in the subjects of neurology and mental diseases he was appointed in 1893 pathologist to the West Riding Asylum at Wakefield under Mr. W. Bevan Lewis. Here he displayed abilities admirably befitting him for the position which he occupied. His command of modern languages—German, French, Italian, Portuguese, and Spanish—was thorough, affording him a wide acquaintance with the trend of modern scientific thought. His reading was extensive and his acquisitiveness remarkable. He was peculiarly successful in following up in the laboratories the work of Golgi and Ramon y Cajal upon the minute structure of the brain and spinal cord, and his demonstrations of cerebral structure, normal and pathological, were unrivalled. His descriptive powers were great and his graphic delineation of complex nervous structures appealed at once to the attention of his audience. He was facile with both pen and pencil and was endowed with a genuine artistic temperament and a scientific imagination of no mean order. As an officer he united refreshing enthusiasm for scientific work with real capacity for original investigation.

Amiable but impulsive, almost boyish in his exuberance of spirits, his zeal for work was of infectious character in the case of all his associates. His energy was, alas, so uncontrolled as to

be self-destructive and the breakdown which eventually ended his career was long feared by his friends. He was for some years a valued contributor to our columns and his command of foreign languages enabled him to supply us with many interesting *précis* of articles appearing in foreign journals His health, however, gradually gave way and for some 18 months before his death he practically did no scientific or literary work.

ROLAND ARTHUR STEVENSON, L.R.C.P. LOND., M.R.C.S. ENG.

AT Stoke in-Teignhead, Devon, on Nov. 19th, the body of Mr. Roland Arthur Stevenson, second son of the Rev. E. Stevenson, rector of Stoke-in-Teignhead, was laid to rest in the same grave where four years ago his youngest brother, Leslie, midshipman of the *Cæsar*, was buried. The deceased, who was 38 years of age, was educated at the Owens College, Manchester, and St. Thomas's Hospital, London, and obtained the qualifications of L.R.C.P. Lond. and M.R.C.S. Eng. in 1899. He afterwards held the appointments of house physician at the Brompton Consumption Hospital and was then elected assistant medical officer of the Pinewood Sanatorium, Wokingham, and after a few years was appointed medical superintendent of the institution. Mr. Stevenson was extremely popular at the institution and much sorrow is felt there and in Devonshire at his death, which occurred from appendicitis on Nov. 15th. Many wreaths were sent to the funeral from the residents of the sanatorium and from friends in Stoke-in-Teignhead and district, many of whom had known him from a boy.

SAMUEL AIRD JOLLY, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.

Mr. S. Aird Jolly, of Wingfield, Acacia-road, Acton, who enjoyed a large practice in Acton and the adjoining district, died on Nov. 14th, at the age of 55 years. He held the position of medical officer and public vaccinator in the Brentford union, and was also one of the medical staff of the Acton Cottage Hospital and Dispensary. Death was due to meningitis, and came with remarkable suddenness. As a well-known medical practitioner in Middlesex Mr. Jolly will be greatly missed and especially by the poor. He was a staunch Churchman and during the recent summer was instrumental in obtaining the presence of Her Highness the Princess Louise Augusta of Schleswig-Holstein at a garden fête in the rectory grounds on behalf of the parish church extension fund.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. L. V. Popoff, who succeeded to Professor Botkin's chair in the St. Petersburg Military Medical Academy. He was a voluminous writer on medical subjects. His age was 62 years.—Dr. Rabot of the Lyons Hospitals.—Dr. Pianteau, professor of pathological anatomy in the Medical School of Algiers.—Dr. José Benicio de Abreu, professor of clinical medicine in the University of Rio de Janeiro.—Dr. Gustav Adolf Boehme, surgeon-general in the German army, whose name is well known in connexion with the Red Cross movement. He was in his seventieth year and had retired some four years ago.—Dr. Reincke, who was largely responsible for the reorganisation of the sanitary department of Hamburg.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Heinrich von Bardeleben, a son of the eminent surgeon, has been recognised as *privat-docent* of Gynæcology.—*Berne:* Dr. Asher of Leipsic has been appointed Extraordinary Professor of Physiology.—*Bonn:* Dr. Karl Schmiz has been recognised as *privat-docent* of the History of Medicine.—*Cracow:* Dr. Joseph Latkowski and Dr. Erwin Miesowcz have been recognised as *privat-docenten* of Internal Medicine.—*Lemberg:* Dr. Stanislaus Badzynski has been appointed to the chair of Medical Chemistry and Dr Paul Kucera has been appointed Extraordinary Professor of Hygiene.—*Lyons:* Dr. Nicolas, *agrégé*, has been appointed Clinical Professor of Dermatology and Syphilis in succession to Dr. Augagneur; Dr. Quiart, *agrégé* of the Paris Faculty, has been appointed Professor of Natural History in succession to Dr. Lortet.—*St. Petersburg (Military Medical Academy):* Dr. Danilevski is about to retire from the post of Director of the Academy.—*Strasburg:* Dr. Jacob Fiédéric has been recognised as *privat-docent* of Anatomy and Anthropology.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 27TH.

THE eighty-fourth session of the General Council of Medical Education and Registration for the United Kingdom was opened in the reconstructed hall, 299, Oxford-street, London, to-day. Dr. D. MACALISTER, the President, occupied the chair. All the members were present except Dr. Barrs and Dr. Cocking, who were unable to attend owing to illness.

New Members.

Mr. James William Beeman Hodsdon was introduced by Sir John Batty Tuke as the new representative of the Royal College of Surgeons of Edinburgh in place of Sir Patrick Heron Watson. Sir Charles Bent Ball, introduced by Dr. Little, took his seat as the representative of the University of Dublin, in room of Dr. Bennett.

The President's Address.

[The PRESIDENT opened the business by delivering an address of a very interesting character. After referring in eloquent terms to the merits and services of the three retiring members, Sir Patrick Heron Watson, Dr. E. H. Bennett, and Sir Victor Horsley, he welcomed Mr. Hodsdon and Sir Charles Ball—an old member of the Council—in place of the two former, and pointed out that Sir Victor Horsley's seat would be filled by one of the three successful condidates at the election of Direct Representatives now proceeding. He continued as follows:]—The petition of the British Optical Association for the grant of a Charter, concerning which resolutions were adopted by the Council on May 24th and transmitted to the Lord President, has been refused. It is, moreover, understood that the Sight-testing Opticians Bill, introduced in the House of Lords with a purpose similar to that of the proposed charter, has been dropped. Another petition for a charter of incorporation was presented by the "National Association of Medical Herbalists of Great Britain, Limited," and was advertised in the *London Gazette* at the beginning of July. As it was apparent that the grant of the powers and privileges sought for would be dangerous to the public and would tend to defeat the purposes of the Medical Acts, a memorandum setting forth the objections to the grant was drafted and approved by the members of the Executive Committee for transmission to the Lord President. We have now been officially informed that in this case also His Majesty in Council has been advised to refuse the prayer of the petitioners. The Executive Committee has had before it some additional information respecting medical qualifications in Japan other than those conferred by the Imperial University. On this subject it will report in due course to the Council. The committee has also under consideration applications from the Provincial Medical Board of Nova Scotia and from the University and College by which medical degrees are granted in that province, requesting that in pursuance of the Order in Council of May 11th, 1906, these provincial diplomas may be recognised for registration in the Colonial List of the Medical Register. A memorandum setting forth the course of medical study and examinations enforced by law in Nova Scotia has been prepared for the information of the committee and will be printed with its minutes on the subject. During the summer it was my privilege to re-visit Canada in connexion with the meeting of the British Medical Association at Toronto. By the kindness of the Lord President of the Privy Council and of the Governor-General I was enabled to meet Ministers of the Crown at Ottawa, Toronto, and Quebec, and other influential persons interested in the subject of medical reciprocity between Canada and the mother country. I found that in some cases misconceptions existed as to the effect of recent Imperial legislation on the question and as to the steps that are now necessary to procure the application of the Medical Act of 1886 to particular provinces. There is reason to believe that the explanations offered in answer to inquiries on these points have been serviceable in removing such misconceptions. Indeed, from an unofficial communication that has recently arrived it would appear that in one important province, which at present does not accept British diplomas for registration, active steps are now being taken to

bring about the mutual recognition of medical qualifications as between this country and the province. It gives me great pleasure to acknowledge the courtesy which as your President I received at the hands of the Dominion and Provincial Ministers and of the university and medical authorities in Canada. From what I was able by their kindness to see and hear of the conditions of medical and scientific education in the Dominion I was strengthened in my conviction that nothing but good can result from a closer connexion and a freer interchange between the professional schools there and here.

[Having alluded to the celebration of the four hundredth anniversary of the University of Aberdeen, he continued:—]

During the hearing of certain cases in May the desire was expressed that the Council should be formally notified of all cases in which medical or dental practitioners are convicted on such charges as might bring them within the operation of the penal clauses of the Medical or Dentists Acts. Communications were accordingly addressed by the Registrar to the Secretary of State for the Home Department, the Under Secretary for Scotland, and to the Chief Secretary to the Lord-Lieutenant of Ireland, asking that instructions might be given to this effect. From England and Ireland we have received replies stating that the desired instructions have been issued; from Scotland we have so far heard only that our request "will receive attention." In certain cases that will come before you for inquiry information received in consequence of the steps thus taken by the Government authorities will be placed at your disposal. The penal cases which you will have to consider do not, I think, raise any new point of principle; they have been carefully prepared for your inquiry by the help of the reconstituted Penal Cases Committee and of your legal advisers. One of the dental cases illustrates afresh the unsatisfactory state of the law in relation to joint stock companies which purport to carry on professional practice. The Bills prepared on the Council's behalf, by means of which it is proposed to remedy in some measure the existing abuses, have been communicated to the Lord President; but, acting on advice which we could not disregard, we have not attempted to submit them for consideration by Parliament during the present autumn session. Next year we may hope to be more successful in urging them on the attention of Parliament. An important opinion from eminent counsel, bearing on the "privilege" attaching to the documents and evidence submitted in connexion with the penal procedure of the Council, has been obtained and will be submitted to you *in camerâ*. It may be necessary, in pursuance of the advice thus given, that you should sanction an addition to the Standing Orders relating to judicial inquiries under the Medical and Dentists Acts. The Standing Orders respecting the inspection and visitation of examinations have been so adjusted by the Executive Committee as to embody the important principles laid down by the Council at its last meeting. You will be asked to approve the form into which the rules have been cast by the committee and formally to sanction the issue of a revised edition of the Standing Orders which, owing to the accumulation of a number of minor amendments made from time to time by the Council, it has been thought necessary to prepare. The important report of the Practical Midwifery Committee has by your direction been forwarded to the several teaching and examining bodies for their observations. From a large number of these bodies replies have been received and have been arranged by the Registrar for the information of the committee which met yesterday to consider them. The committee will probably be able to report during the present session on the progress it has made. The Education Committee also will have something to say on the questions remitted to it on the motion of Dr. Bruce (Minutes, May 26th, 1906)—namely, what effect has been given to the proviso concerning pupilage contained in one of the recommendations of the Council, and generally what steps are taken by the licensing bodies to insure that the fifth year of the minimum curriculum shall be devoted to clinical study. From inquiries which have been made by the Registrar it would appear that little or no use is made of the permission to reckon a period of pupilage with an approved practitioner as part of the fifth year. It will be for the Council to consider whether a proviso that is practically inoperative is worth retaining. Its inclusion among our recommendations has already given rise to misconceptions regarding the lawfulness of employing in medical practice the assistance of unqualified students who are described as pupils. In conclusion, I would say that, so far as can be foreseen, the business on the programme will probably be compassed by the end of this week. As the General Registrar and his staff will soon be immersed in the laborious work of receiving, verifying, and counting ballot papers under the direction of the Branch Council for England the comparative lightness of our agenda is highly convenient on this occasion.

On the motion of Dr. NORMAN MOORE, seconded by Dr. LITTLE, the President was thanked for his address which it was agreed to print in the minutes.

Results of Competitions for Army and Indian Medical Services.

The following tables were received: (*a*) Table showing results of competition held in July, 1906, for commissions in the Army Medical Service, and (*b*) table showing results of competition held in July, 1906 for commissions in the Indian Medical Service. In connexion therewith the Registrar reported in reference to Table (*b*):—

As appears from the usual statement sent by the department, there were 47 candidates, of whom 25 passed for vacancy, nine qualified but were unsuccessful, while 13 were rejected. In addition to the statement, however, a complete table of marks was sent, from which the following information has been extracted:—All the 13 candidates rejected failed to obtain qualifying marks, seven of them are not stated to have failed in any particular subject, while one failed in chemistry only, three failed in medicine only, one failed in anatomy only, and one failed in each group of subjects, including midwifery.

Dr. MCVAIL moved and Mr. YOUNG seconded:—

That the thanks of the Council be conveyed to the Director-General of the Army Medical Service and the Under Secretary of State for India, respectively, for the returns which they have again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

Dr. SAUNDBY expressed the opinion that the tables were of no use and he proposed as an amendment that the words requesting a continuance of the returns should be deleted.

Dr. F. G. ADYE CURRAN seconded the amendment.

Dr. MCVAIL said that the Examination Committee had found the returns of very great use. They informed the profession at large as to the standard of the various examinations over a series of years.

Dr. LINDSAY STEVEN supported the amendment.

After some further discussion the Council voted. The amendment was lost and the motion was then carried *nem. con.*

Report on Dental Business.

On the motion of Dr. NORMAN MOORE, seconded by Mr. MORRIS, the following report from the Executive Committee on the dental business transacted since the last meeting of the Council was received and entered on the minutes:—

(1) The prescribed conditions having been duly fulfilled in each case, the names of the undermentioned persons have been restored to the Dentists' Register, from which they had been erased in conformity with the provisions of Section 12 of the Dentists Act, 1878: David J. Cameron, George Campbell, James W. Dallachy, Bertrand S. Davies, Frederick Donovan, Henry Forewell, John H. Gartrell, William H. Hall, Harold O. W. Harris, Henry Highfield, Gordon Hooper, Thos. C. M. Mulliner, Matthew S. Philson, Henry A. Washbourne.

(2) Information was received through the Colonial Office of the intention not to proceed with a proposed Bill to regulate dental practice in the Colony of Hong Kong.

(3) The committee received from the authorities in England and Ireland promises to furnish to the Council records of all fines inflicted on dental practitioners, and an assurance from the Under Secretary for Scotland that the matter would receive attention.

(4) The Committee received through the Colonial Office a copy of an Act to regulate the practice of dentistry in Newfoundland, and referred it to the Dental Education and Examination Committee for its information.

(5) A communication was received from the Royal College of Surgeons of England intimating that its Licence in Dental Surgery had been withdrawn from three dental practitioners whose names had been erased by the General Council at its May session.

In reply to a question by Mr. MORRIS relative to the last clause in the report,

The PRESIDENT stated that erasure from the Dentists' Register automatically removed the person concerned from the list of Licentiates of any body. Similarly, restoration to the Dentists' Register automatically restored a name.

Revision of Standing Orders.

The Executive Committee submitted a report as to the revision of the Standing Orders relating to visitation and inspection and the adjustment of other amendments directed by the Council.

The Executive Committee reported that they had considered this

reference and that they had adjusted the Standing Orders in regard to the visitation and inspection of examinations as follows:—

CHAPTER XXIII.—INSPECTION AND VISITATION OF EXAMINATIONS.

A.—INSPECTION.

1. Under the powers conferred by Section 3 of the Medical Act, 1886, the Council shall appoint inspectors to attend such of the qualifying examinations of the several licensing bodies as the Council may direct.

2. It shall be the duty of the Examination Committee to advise the Council as to the time and place of each inspection.

3. Three inspectors—one for medicine, one for surgery, and one for midwifery—shall be appointed for definite periods; and it shall be their duty to conduct inspections where and when required by the Council.

4. An inspector shall not be a member of the Council, nor shall he during his tenure of office act as examiner in any qualifying examination.

5. Each inspector shall receive from the President a formal commission in writing, under the seal of the Council.

6. The remuneration of an inspector shall be at the rate of five guineas for each day during which he is absent from home on the business of the Council, together with an allowance for his actual travelling and hotel expenses.

7. It shall be the duty of inspectors to report to the Council their opinion as to the sufficiency or insufficiency of each examination inspected by them. Their reports shall set forth in order all necessary particulars as to the questions proposed in the written, oral, and practical parts of the examination, the cases and the appliances provided for clinical examinations, the arrangements made for invigilation, the method and scale of marking, the standard of knowledge shown by successful candidates, and generally all such details as may be required for adjudicating on the scope and character of the examination.

8. Inspectors shall include in their reports, in the form of a brief diary, a statement of the days and hours at which they were present during the course of each examination inspected, and of the parts or divisions of the examination in progress on each day.

9. Inspectors shall be made acquainted with such previous reports on the examinations inspected as the Executive Committee or the President may direct, together with the remarks and observations of the licensing bodies and the reports of the Examination Committee thereon. They shall also be provided with copies of the recommendations of the Council in regard to professional examination, and shall include in their reports a statement of the extent to which these recommendations have been carried out in the case of each examination inspected.

10. The reports of inspectors when prepared shall be forwarded to the President, who shall cause them to be printed. The final proof copies of the reports, as corrected, shall be signed in writing by the inspectors, and shall be preserved by the General Registrar as the authoritative copies

11. Previous to the meeting of the Council at which the reports of inspectors are to be considered, confidential copies, not exceeding 50 in number, of each report shall be forwarded for consideration to the licensing body to which such report refers, with a request that the body will make such remarks and observations thereon as may be thought necessary and will forward the same with as little delay as possible to the General Registrar.

12. A confidential copy of each report of the inspectors, together with the remarks and observations made thereon by the licensing body concerned, shall be supplied, when ready, to each member of the Council.

13. The Examination Committee shall consider and report to the Council on each report of the inspectors.

14. A copy of each report of the inspectors, together with the remarks and observations made by the licensing body concerned, and the report of the Examination Committee thereon as approved by the Council, shall be forwarded to the Privy Council.

B.—VISITATION.

1. Under the powers conferred by Section XVIII. of the Medical Act, 1858, the Council shall from time to time appoint members of the Council as visitors, who shall be deputed to attend and be present at such of the professional examinations required for obtaining the qualifications of any of the licensing bodies as the Council may direct.

2. It shall be the duty of the Examination Committee to advise the Council as to the examinations to be visited and as to the time and place of each visitation.

3. Each visitor shall receive from the President a formal commission in writing under the seal of the Council.

4. A visitor shall not receive any remuneration but shall be paid his actual travelling and hotel expenses.

5. It shall be the duty of visitors to report, separately from the inspectors, on each examination visited by them, and they shall include in their report such particulars and observations thereon as they deem important for the information of the Council.

6. Visitors shall include in their reports, in the form of a brief diary, a statement of the days and hours at which they were present during the course of each examination visited and of the parts or divisions of the examination in progress on each day.

7. The reports of visitors when prepared shall be forwarded to the President, who shall cause them to be printed. The final proof copies of the reports, as corrected, shall be signed in writing by the visitors, and shall be preserved by the General Registrar as the authoritative copies.

8. The reports of visitors shall be referred by the President to the Examination Committee for consideration and report to the Council and shall be deemed confidential unless in any particular case the Council shall otherwise direct.

Dr. PYE-SMITH moved that the report be received and entered on the minutes.

This was seconded by Sir JOHN W. MOORE and agreed to.

Dr. PYE-SMITH moved that the regulations as formulated be adopted by the Council.

Sir JOHN W. MOORE seconded the motion.

The PRESIDENT remarked that no change had been made except embodying in the text of the rules the resolutions formerly come to by the Council.

Dr. LINDSAY STEVEN moved to amend Standing Order No. 2 by providing that it shall be the duty of the Examination Committee and of the Education Committee acting jointly to advise the Council as to the time and place of each inspection and visitation. He thought it was an error for the Council to depute such an important matter as the time and place of inspection and visitation to the Examination Committee. It was the duty of all the members to advise the Council and by including the Education Committee in the Standing Order a larger number of members would be concerned in this important duty.

Sir J. BATTY TUKE seconded the amendment, which after further discussion was adopted.

The adoption of the regulations was then agreed to.

The committee also reported that it had further adjusted the Standing Orders Ch. IX.; 6, 9 XIV. 4 (2) (*b*); and the Appendix to Ch. XIV., embodying alterations which had been adopted by the Council from time to time since the last revision on July 15th, 1903.

On the motion of Dr. NORMAN MOORE, seconded by Mr. THOMSON, the report was received and entered on the minutes and it was agreed that power should be given to the Executive Committee to issue the volume of Standing Orders when ready.

Election of Direct Representatives.

Another report by the committee was in the following terms:—

On May 28th, 1906, the General Council passed the following resolution:—

"That the Executive Committee be instructed to approach the Privy Council with the object of securing such alterations in the Regulations 8 and 10 of the Schedule of Instructions to Voters under Section 8 of the Medical Act, 1858, as will provide for the adoption of the principles of voting by ballot in lieu of the existing open system of election of Direct Representatives."

In consequence of the representation which was thereupon made the Privy Council has given its consent to the proposed change in the mode of election, and revised rules for the conduct of elections by means of the use of ballot papers have been received.

On the motion of Dr. NORMAN MOORE, seconded by Mr. MORRIS, the report was received and entered on the minutes.

The Dentists' Register.

The Council afterwards sat *in camerâ* and at the close of its deliberations the PRESIDENT announced that the Council had decided to restore to the Dentists' Register the name and qualifications of Mr. William Jones.

The Council adjourned to the following day.

WEDNESDAY, NOV. 28TH.

A large part of the day was taken up with the consideration of penal cases, as the result of which the names of three medical practitioners were erased from the Medical Register.

After this Sir THOMAS MYLES, the representative of the Royal College of Surgeons in Ireland, brought forward a motion that it should be remitted to the Education Committee "to consider and report how far it might be possible to dispense with the customary attendance of students on systematic lectures in the medical schools." The question which Sir Thomas Myles wished to raise was whether the time so saved might be devoted to a more extensive study of the purely scientific portion of the curriculum, and his motion provoked a keen and interesting debate. When the Council divided there voted for the motion, 7; against, 17; while 5 members declined to vote and 4 were absent.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow, held on Nov. 8th, 9th, 13th, 14th, and 15th, 95 candidates presented themselves for the examination, of whom 27 were approved and 68 were rejected. The following are the names of the successful candidates:—

Alfred Edward Arthur Carver, B.A. Cantab., Cambridge University; William Lawrence Cripps, B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and St. Bartholomew's Hospital; William Isaac Cumberlidge, B.A. Cantab., M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Robert Dow Forbes, M.D., C.M. McGill,

Montreal, M.R.C.S., L.R.C.P., McGill and King's College; William Herbert Forshaw, M.R.C.S., L.R.C.P., Sheffield University, King's College, and London Hospital; Harold Frankish M.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., Oxford University and Middlesex Hospital; Edward Gillespie, M.B., Ch.B. Glasg., Glasgow University, London and Middlesex Hospitals; Harry Tyrrell Gray, M.A., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and St. Thomas's Hospital; Philip Thomas Harper, St. Thomas's Hospital; Walter Burford Johnson, St. Thomas's Hospital; Cecil Augustus Joll, B.Sc. Lond., University College, Bristol; Harold Turley Mant, M.B., B.S. Lond., M.R.C.S., L.R.C.P., University College Hospital; Cyril Macdonald Plumptre, Guy's Hospital; Norman Prescott, University College and King's College Hospitals; Frank Arthur Roper, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Reginald John Lambart Sladen, M.R.C.S., L.R.C.P., London Hospital; Edgar Wilmot Smerdon, Edinburgh University; Henry Joste Smith, Guy's Hospital; Alfred Ellington Stansfeld, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Arthur Carlile Sturdy, B.A. Cantab., St. Bartholomew's Hospital; Frans Karel te Water, Edinburgh University; Hubert Gordon Thompson, M.D. Liverp., Liverpool University; Reginald George Turner, M.R.C.S., L.R.C.P., St. George's Hospital and King's College; Paul Jenner Verrall, B.A. Cantab., St. Bartholomew's Hospital; Kenneth Macfarlane Walker, B.A., M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Washington Everitt Wilks, Charing Cross Hospital; and Albert Samuel Worton, M.B. Glasg., Glasgow and Liverpool Universities.

The following gentlemen passed in the subjects indicated at the First Professional Examination for the Licence in Dental Surgery held on Nov. 9th and 10th:—

Mechanical Dentistry and Dental Metallurgy.—Frederick George Hayward Armin; Reginald John Bailey, Walter Pigott Barfoot, and Guy Capper Birt, Royal Dental Hospital; George Rowlands Boorer, National Dental Hospital; Reginald John Burton, University College, Bristol; William Hern Cornelius, Royal Dental Hospital; Richard Pittard Davies, National Dental Hospital; William Drew, Royal Dental Hospital; Fred Halsall, Liverpool; Walter Parker Harrison, Royal Dental Hospital; Walter Stanley Hoare, National Dental Hospital; Graham Hunt and Charles Cabread Jones, Guy's Hospital; Lionel Gilbert Jordan and Thomas Neville Jeffries, Birmingham University; Leonard Algernon Bertram King, Guy's Hospital; Frederic Butcher Kirkman, Liverpool University; William Edward Southcomb May and Archibald Cookes Mence, Royal Dental Hospital; Geoffrey Ayres Phillips and James Frederick Place, Manchester University; Ernest Guy Robertson, Guy's Hospital; Edward Spenser Sampson, Royal Dental Hospital; Alec Linford Saul, Guy's Hospital; John Henry Skerritt, Sheffield University; and Barry Stobie, John Eric Wheeler, Arthur White, and Charles Reynolds Woodruff, Royal Dental Hospital.

Mechanical Dentistry.—Ernest James Archer, Guy's Hospital; John Button, Manchester University; Cyril Allan Collis, Royal Dental Hospital; Frederick Oscar Hume, Guy's Hospital; Maurice Joseph Marks, Guy's Hospital; Lewis Trevor Bamford Matthews, Birmingham University; Walter Cecil Murray, Royal Dental Hospital; Charles Robert Moaver Peaty, Guy's Hospital; Arnold Renshaw, Manchester University; William Skerritt, Sheffield University; Stanley Runton Storey, Royal Dental Hospital; and Arthur Brookes Thomason, Manchester University.

Dental Metallurgy.—William Percy Charles Ashdown, National Dental Hospital; Malcolm Barker, Royal Dental Hospital; Reginald Bates, Manchester University; William Edwin Guilding and Arthur Martin Henry, Guy's Hospital; Robert Hope, D.M.D., Harvard University, Guy's Hospital; Dorie Yoon Hylton, Percy Edgar Kendall, and Isaac Levy, Guy's Hospital; Oswald McGowan, M.A. Cantab., National Dental Hospital; Leopold Kepler Percy, Royal Dental Hospital; and Alfred Samuel, Guy's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in November the following candidates passed in the subjects indicated:—

Surgery.—F. G. Edholm (Sections I. and II.), Charing Cross Hospital; C. J. M. Lawrence (Section II.), Manchester; W. S. Mitchell (Sections I. and II.), St. Mary's Hospital; L. Nicholls (Sections I. and II.), Cambridge and London Hospital; and J. W. Peatt (Section II.), London Hospital.

Medicine.—L. C. W. Brigstocke (Section II.), Oxford and St. George's Hospital; C. L. Driscoll (Sections I. and II.), Charing Cross Hospital; C. G. Grey (Sections I. and II.), St. Bartholomew's Hospital; C. J. M. Lawrence (Sections I. and II.), Manchester; L. Nicholls (Section II.), Cambridge and London Hospital; and S. Singh (Section I.), Glasgow.

Forensic Medicine.—C. J. M. Lawrence, Manchester; S. Singh, Glasgow; and W. V. P. Teague, London Hospital.

Midwifery.—L. G. H. Furber, St. Bartholomew's Hospital; and C. C. Morrell, London Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: L. C. W. Brigstocke, F. G. Edholm, C. J. M. Lawrence, W. S. Mitchell, L. Nicholls, and J. W. Peatt.

UNIVERSITY OF OXFORD.—In the examinations for the Diploma in Public Health the following candidates passed:—

Part I.—P. de Mello, E. M. Griffiths, A. H. Gerrard, A. H. Hogarth, H. C. Lecky, and A. H. Macdonald.

Part II.—A. H. Gerrard, A. H. Hogarth, H. C. Lecky, and A. H. Macdonald.

UNIVERSITY OF LONDON.—At examinations held in October the following candidates satisfied the examiners:—

M.B., B.S. EXAMINATION.

Honours.—†Ernest Frederick Finch, University of Sheffield; ††Robert Applegarth Hendry, University of Liverpool; *††Charles Aubrey Pannett, B.Sc. (bracketed for University medal), St. Mary's Hospital; *Arthur Pearson and ‡George French Stebbing, Guy's Hospital; ‡Douglas Compton Taylor, University College; and *††William Henry Trethowan (bracketed for University medal) and †Ernest Wragg, Guy's Hospital.

* Distinguished in Medicine. † Distinguished in Pathology.
‡ Distinguished in Surgery.
§ Distinguished in Midwifery and Diseases of Women.

Pass.—William Arnott, University of Leeds; Thomas Henry Barton, Guy's Hospital; Henry Howarth Bashford, London Hospital; Arthur William Berry and John Smeed Bookless, Guy's Hospital; Alwyn Hewett Bradley, University of Birmingham; Hilda Margaret Byles, London (Royal Free Hospital) School of Medicine for Women; Henry Joseph Cates, St. Bartholomew's Hospital; Isaac Reginald Cook, Guy's Hospital; Ivor Jones Davies and Charles Noël Davis, St. Bartholomew's Hospital; Samuel Wilfrid Daw, Guy's Hospital; Joseph Bernard Dawson, University of Birmingham and London Hospital; Albert Davies Edwards, London Hospital; William Harold Arthur Elliott, University of Leeds; Ernest William Giesen, Guy's Hospital; Leonard Fabian Hirst, University College; Bernard Watson Jones, University of Birmingham; Edith Anne Jones, London (Royal Free Hospital) School of Medicine for Women; Harold Albert Klach, St. Thomas's Hospital; William Augustine McEnery, Middlesex Hospital; Patrick Francis McEvedy, Guy's Hospital; Ivan Clarkson Maclean, St. Thomas's Hospital; Arthur Thomson Marshall, King's College; Dorothea Clara Maude, London (Royal Free Hospital) School of Medicine for Women; Clifford Antony Leo Mayer, Guy's Hospital; Sylvia May Moore, London (Royal Free Hospital) School of Medicine for Women; Edward Henry Allen Pask, University of Sheffield; Eleanor Whitworth Perkins, London (Royal Free Hospital) School of Medicine for Women; William Cowper Pickering, St. Bartholomew's Hospital; Alan Randle, University College; Ernest Frederick Reeve, Guy's Hospital; John Elliott Robinson, St. Bartholomew's Hospital; William Octavius Sankey, St. Thomas's Hospital; Harold Brooke Scargill, University of Leeds; William Lochhead Scott, University College; Zilla Mary Scruby, London (Royal Free Hospital) School of Medicine for Women; James Ernest Sutcliffe Smith, Victoria University; Grace Maud Stagg, London (Royal Free Hospital) School of Medicine for Women; George Wray Sudlow, University College; Bessie Weldon Symington, London (Royal Free Hospital) School of Medicine for Women; Alfred K. Burford R. W. Taylor, Charing Cross Hospital; Ida Clare Tengely, London (Royal Free Hospital) School of Medicine for Women; Stanley Upton, St. Bartholomew's Hospital; Ida Margaret Waller, London (Royal Free Hospital) School of Medicine for Women; Edwin Joseph Wyler, London Hospital; Graham Pallister Young, King's College; and Arthur Zorab, Guy's Hospital.

B.S. EXAMINATION (*for Students who graduated in Medicine in or before May, 1904*).

Pass.—John Walter Forbes Ralt, University College and London Hospital.

The following candidates have passed in one of the two groups of subjects:—

SUPPLEMENTARY PASS LIST.

Group I.—Godfrey Frederick Ely Allison, Guy's Hospital; Walter Francis Corfield, University College; Allan Baines Fearnley, St. Bartholomew's Hospital; John Norman Glaister, University College; Basil Thomas Parsons-Smith, St. Thomas's Hospital; Catherine Payne, London (Royal Free Hospital) School of Medicine for Women; John Mackay Plews, St. Bartholomew's Hospital; and Thomas Williams Wade, Charing Cross Hospital.

Group II.—Edgar Alban, Guy's Hospital; Harry Oliver Blanford, St. Thomas's Hospital; John Frederick Broughton, University College; Herbert D. Clementi-Smith, St. Bartholomew's Hospital; Rose Lilian Humphrey Davy, London (Royal Free Hospital) School of Medicine for Women; Guy Stanley Earl, St. George's Hospital; Kenneth Edward Eckenstein, St. Thomas's Hospital; Samuel Lewis Graham, University College; Leopoldine W. D. Griffiths, London (Royal Free Hospital) School of Medicine for Women; Ernest Cuteliffe Hadley, University of Birmingham and Queen's and General Hospitals; Henry Holroyd, Middlesex Hospital; Emily Helen Morris, London (Royal Free Hospital) School of Medicine for Women; Arthur John Scott Pinchin, St. Thomas's Hospital; Ernest Littleton Sandiland, London Hospital; St. John Alexander M. Tolhurst, Guy's Hospital; Alfred Geddes Tresidder, London Hospital; Thomas Edgar Walker, University of Liverpool; Cuthbert Gerald Welch, London Hospital; and John Black Ferguson Wilson, University of Leeds.

(The names of students who have now completed the M.B., B.S. Examination do not appear in this list.)

N.B.—These lists, published for the convenience of candidates, are issued subject to their approval by the Senate.

TRINITY COLLEGE, DUBLIN.—At the Final Examination in Medicine held in Michaelmas term the following candidates were successful:—

Thomas O. Graham, Cecil T. Conyngham, John Gray, Percy B. Egan, Dudley F. Torrens, Arthur E. Knapp, James E. McFarlane, and Thomas B. W. MacQuaide.

LONGEVITY.—On Nov. 17th Mrs. Brunt, of Berrow, Somersetshire, celebrated the 101st anniversary of her birth.

NATIONAL DENTAL HOSPITAL AND COLLEGE.—The annual dinner of the past and present students of the National Dental Hospital and College, Great Portland-street, W., was held on Nov. 23rd at the Trocadéro Restaurant, Mr. Henry Morris, President of the Royal College of Surgeons of England, being in the chair. In proposing the toast of the

evening. "The National Dental Hospital and College," the chairman said that he was wearing on his coat a medal presented to him on a similar occasion 17 years ago, and he felt that the fact of the hospital staff and students inviting him to preside once more was in part due to their recognition of the services which the Royal College of Surgeons had rendered to the profession of dentistry. In a brief and interesting review of the growth of the dental profession he said that the Royal College of Surgeons had by a long lead been the pioneer in giving the present high quality and standard to the dental education of modern times, and he thought it was a congratulatory fact that the ambitions of two professional bodies which started with some differences of opinion as to whether dentistry should be closely associated as a special branch of the general profession of surgery with the Royal College of Surgeons had resulted in the end for the public benefit and advantage. There was now no question that the Licentiateship granted by the College was a standard recognised by all as a mark of professional status. Up to 1860, he pointed out, there existed no special hospital in London to advise the necessitous poor in regard to their teeth, the only opportunity they had being to repair to a general hospital where the result was invariably an extraction. At the present time tens of thousands were treated by the dental hospitals in a conservative manner. The National Dental Hospital not only gave relief to a large number of people at the hospital, but provided also cards to the overflow patients who could seek advice from the old pupils of the school in their own neighbourhood, a practice which Mr. Morris said he wished could be adopted in the general hospitals of London. Mr. P. Sidney Spokes, the Dean, expressed an optimistic view as to the future of the hospital and college and endorsed the views of Mr. Morris on the value of the Licentiateship. After this speech the prizes for the session of 1905–06 were distributed to the successful students. The toast of "The Past and Present Students" was proposed by Mr. Leonard Matheson, Mr. Gudgeon and Mr. J. A. Rose replying. The proceedings terminated after the toasts, respectively, of "The Visitors" and "The Chairman" had been proposed and enthusiastically received.

ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of the Royal Dental Hospital of London was held in the White-hal Rooms of the Hôtel Métropole on Nov. 24th, Mr William Hern, formerly dental surgeon and lecturer of dental surgery in the hospital, occupying the chair. In giving the toast of "The Past and Present Students," Mr. Hern remarked that the most important office of the dinner, he thought, was that of bringing the past and present students together when they could enjoy not only social discussion but the discussion also to their mutual advantage of the advances that have been made in dental science. It was also pleasing to find that the old student never forgot his debt to his alma mater. Mr. W Harrison, replying for the past students, expressed his gratitude for the training which he had received at the hospital; and Mr. A. E. Ironside and Mr. A. T. Pitts, joint "Saunders" scholars, on behalf of the present students, said that the relations between the staff and the students were all that could be desired. The toast of "The Hospital and School" was proposed by Mr. Henry Morris, President of the Royal College of Surgeons of England, who in giving an interesting review of the history of the dental profession reminded his listeners that the status of dentistry as a calling had been raised chiefly by the efforts of the Fellows of the College. Dentistry, he said, was a legitimate branch of surgery and it was a source of gratification that the tone had so much improved and that the contributions to dental literature ranked in quality with the work and advances of general surgery. The charter of 1859 paved the way for a scheme for the protection of licentiates of dental surgery, a step which had done much to stop objectionable advertising and to encourage the practice of dentistry on respectable lines. Referring to the progress of the Royal Dental Hospital, he observed that the hospital was founded in 1858 and the number of cases was then 2116. In their new and admirably equipped hospital in Leicester-square 99,000 cases had been treated during the past year. In his view the hospital was a model of what such a hospital should be. It was a great beneficent work which aimed at raising the standard of physical health of the public, and which, moreover, promised to contribute to the solution of certain social questions. Mr. Morris concluded by paying a well-deserved compliment to the dean, Mr. J. F. Colyer, and his staff. In acknowledging the toast Mr. David Hepburn, a vice-president and formerly a member of the staff, made an eloquent appeal for funds and said that the public were evidently realising what a boon the hospital was, as they had recently been in the receipt of some legacies. He paid a warm tribute to their energetic secretary, Mr. J. Francis Pink, in this connexion, who, he said, was most assiduous in looking out for donations and legacies to the hospital, and more particularly for those left to the sole discretion of the executors to distribute to charities. The Dean, who met with a hearty reception, said that the school was in a very healthy condition, students from all parts of the world having joined their ranks. The Licentiateship of the Royal College of Surgeons of England, he said, held its own. Its adoption, he added, placed some pressure on the dental curriculum but the College had cleared the way by reducing the time required for mechanical work from three to two years. He thought that mechanical dentistry was best done at the school rather than by private instruction, a view which was endorsed by the experience of old students. He concluded by referring to a scheme on foot to commemorate the forthcoming jubilee of the hospital by the foundation of a scholarship to be subscribed by old students. Sir Richard Douglas Powell, President of the Royal College of Physicians of London, in the absence of Mr. A. Pearce Gould, replied to the toast of "The Visitors." In the course of his remarks Sir R Douglas Powell referred to the great assistance which the dental surgeon was capable of rendering to the physician. It may be added that during the afternoon in the same day an "At Home" was held at the hospital. The object of this annual gathering is to give to the old students an opportunity of seeing cases of interest that have been under treatment during the year and to show in a general way the methods of treatment usually adopted by the various members of the staff. Several demonstrations relating to mechanical dentistry were given and between 40 and 50 patients were shown. These latter included examples of restoration of lost tissue following operation, cases of cleft palate treated by mechanical appliances, methods of correcting irregularities of the teeth, and cases of surgical interest connected with diseases of the teeth.

PRESERVATIVES IN FOOD.—A conference was held in the lecture hall of the Incorporated Institute of Hygiene, Devonshire-street, London, W., on Nov. 29th, to consider the subject of "Preservatives in Food, their Use and Abuse." Dr. F. W. Tunnicliffe presided and there was a large attendance, among those who accepted the invitation of the Institute being Dr. H. Coates, Dr. W. Arnold Evans, Dr. W. Williams, Dr. Caldwell Smith, Dr. Robert Hutchison, Dr. E. Divers, Dr. R Murray Leslie, Dr. J. F. Butler-Hogan, Dr. Robert Bell, Dr. J. Sim Wallace, Dr. S. Rideal, Mr. Otto Hehner, Mr. A. W. Mayo Robson, Mr. Macmorran, K.C., and Sir Wm. Evans-Gordon. The chairman, in his opening address, stated that they had convened the meeting to consider a matter of great hygienic and economic importance—viz., the use and abuse of preservatives in food. After briefly classifying the substances used for the purpose of preserving food, he said that with regard to the general consideration of the harmfulness or harmlessness to the consumer of foods containing quantities of these substances adequate to preserve the food under ordinary conditions, that is, to render it capable of undergoing, without decomposition, the exigencies of wholesale and retail trade and domestic uses, he would like definitely to remark that the question had gone beyond the stage of *a priori* argument. These substances had all been used now for about ten years. The profession was thoroughly alive to them as a possible, indeed as a probable, source of illness, and what they wanted to elicit was not philosophical considerations with regard to the action of these substances as drugs, but facts based upon careful observation which, he was thankful to say, was almost invariably characteristic of the earnest medical man, who above all was trained in a school of fact. He referred to the medico-legal aspect of the question and, to put it more generally still, to the administration of the Sale of Food and Drugs Act. All of them, he said, whether they were litigants, lawyers, or the most unfortunate and abused, not to say bullied, person—viz., the expert witness—were agreed that the prosecutions under this Act as it is at present administered are unsatisfactory. Police magistrates with a mental agility which could only be described as acrobatic jumped from a case of drunk and disorderly to one involving

questions of extreme scientific erudition and tenuity and meted out to each a jurisdiction of which the best that can be said is that it is summary. Should adequate grounds exist for an appeal, a court of quarter sessions as usually constituted can hardly be regarded as a suitable tribunal before which such issues should be argued. Departmental committees have recommended that such cases should be tried, or at some stage come before a tribunal, part of which, at any rate, should be composed of men trained in the sciences involved. In other branches of ethics, law and medicine meet with great advantage to equity, as, for instance, in the appointment of coroners and Commissioners in Lunacy; it was sincerely to be hoped that reform in this direction would not be long in forthcoming.—An interesting discussion followed and certain motions were put to the meeting and carried.

THE AMALGAMATION OF THE LONDON MEDICAL SOCIETIES.—At a joint special general meeting of the Fellows of the Obstetrical Society of London and of the British Gynæcological Society held at 20, Hanover-square, W., on Nov. 21st, Dr. F. H. Champneys being in the chair, the draft report of the representatives of the council of the Obstetrical and of the Gynæcological Societies on the amalgamation question, already passed by the two councils, having been circulated, the following motion was put from the chair and carried unanimously:—

That this joint special general meeting of the Fellows of the Obstetrical and of the British Gynæcological Societies agrees to the scheme of amalgamation adopted by the two councils and authorises honorary secretaries to communicate this decision to the honorary secretaries of the Union of Medical Societies, and to notify them that Dr. Champneys has been appointed the representative of the Obstetrical Society, and Dr. Macnaughton-Jones that of the British Gynæcological Society to serve on the new committee.

After some explanatory remarks from the chairman as to the working of the amalgamation scheme Dr. Macnaughton-Jones proposed, and Dr. Heywood Smith seconded, a vote of thanks to Dr. Champneys for his conduct in the chair, which was carried by acclamation.

DONATIONS AND BEQUESTS.—The following are the medical institutions which have benefited by the munificent golden-wedding gift of £100,000 given by Mr. and Mrs. H. L. Bischoffsheim of Bute House, South Audley-street, London, W.: Imperial Cancer Research Fund, £40,000; King Edward's Hospital Fund, £10,000; Tuberculosis Research in connexion with the King Edward VII. Sanatorium, £10,000; London Hospital, £2500; Middlesex Hospital, £2500; Charing Cross Hospital, £2500; Queen Charlotte's Lying-in Hospital, £2500; Great Ormond-street Children's Hospital, £2500; Metropolitan Provident Medical Association, £2500; St George's Hospital, £1000; Surgical Aid Society, £1000; Metropolitan Convalescent Homes Association, £1000; and Daneswood Sanatorium, £10,000.—An anonymous donor has sent £100 to the Cancer Research Fund of the Middlesex Hospital.—A gift of £10,000 has been made by Sir James Reckitt to the endowment fund of the Hull Royal Infirmary.—A cheque for 500 guineas has been forwarded by the directors of the Great Northern Railway Company to the governing body of Grantham Hospital. The directors have also conveyed their thanks to all connected with the hospital for their care of, and attention to, those who were injured in the accident at Grantham on Sept. 19th.—Mr. S. S. Kerswill of Plymouth, whose estate was valued at £42,763, has bequeathed three forty-fourths (estimated at £2000) each to the South Devon and East Cornwall Hospital, Plymouth, the Royal Albert Hospital, Devonport, Plymouth Public Dispensary, and Plymouth Royal Eye Infirmary respectively; and two forty-fourths (estimated at £1500) to the Didworthy Consumptive Sanatorium, near Plymouth. He also left one forty-fourth (about £750) to the Devon and Cornwall Ear and Throat Hospital.—The treasurer of Guy's Hospital has received two anonymous donations of £200 and £10 respectively towards the fund for the endowment of medical education and research at Guy's Hospital.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Nouveau Traité de Médecine et de Thérapeutique. Publié en Fascicules sous la Direction de MM. P. Brouardel et A. Gilbert. XXII. Maladies des Organes Génito-Urinaires de l'Homme et de la Femme. Par R. Le Fur, Ancien Interne des Hôpitaux de Paris, et A. Siredey, Médecin de l'Hôpital Saint-Antoine. Price Fr 8.

BARTH, JOHANN AMBROSIUS, Leipzig.

Untersuchungen über künstliche Parthenogenese und das Wesen des Befruchtungsvorgangs. Von Jacques Loeb, Professor der Physiologie an der University of California. Deutsche Ausgabe unter Mitwirkung des Verfassers. Herausgegeben von E. Schwalbe, a.o. Professor an der Universität Heidelberg. Price, paper, M.7.50; bound, M.8.50.

BERGMANN, J. F., Wiesbaden (F. BAUERMEISTER, 49, Gordon-street, Glasgow).

Die Therapeutischen Leistungen des Jahres 1905. Ein Jahrbuch für Praktische Aerzte. Bearbeitet und herausgegeben von Med. & Chir. Dr. Arnold Pollatschek, Brunnenarzt in Karlsbad, Korrespondierendes Mitglied der K. K. Gesellschaft der Aerzte in Wien. XVII. Jahrgang. Price M.8.60, or 8s 9d.

Grundriss der medikamentösen Therapie der Magen- und Darmkrankheiten einschliesslich Grundzüge der Diagnostik. Zweite durch Einfügung der speziellen Diätetik der Magen- und Darmkrankheiten vermehrte Ausgabe. Für praktische Aerzte bearbeitet von Dr. med. P. Rodari, prakt. Arzt und Spezialarzt für Krankheiten der Verdauungsorgane in Zürich. Price M.4.80, or 4s. 10d.

Lehrbuch der Ohrenheilkunde. Für Aerzte und Studierende. In 32 Vorträgen. Von Dr. Friedrich Bezold, Professor der Ohrenheilkunde an der Universität München. Price M.9, or 9s.

Die Vorgeschichte der Menschheit im Lichte unserer entwicklungsgeschichtlichen Kenntnisse. Von Dr. E. Müller de la Fuente. Price M.2.40, or 2s. 9d.

Die Natur und Behandlung der Gicht. Von Dr. Wilhelm Ebstein, Geheimer Medizinalrat, O. ö. Professor der Medizin und Direktor der Medizinischen Klinik und Poliklinik an der Universität Göttingen. Zweite stark vermehrte Auflage. Price M.10.60, or 10s. 9d.

Handbuch der Geburtshülfe. In drei Bänden. Herausgegeben von F. von Winckel in München. Dritter Band, I. Teil. Price M.22.60, or £1 2s. 9d. Dritter Band, II. Teil. Price M.28., or £1 8s.

Die Neurologie des Auges. Ein Handbuch für Nerven- und Augen-ärzte. Von Dr. H. Wilbrand, Augenarzt am Allgemeinen Krankenhause St. Georg in Hamburg und Dr. A. Saenger, Nervenarzt. Dritter Band. Zweite Hälfte. Allgemeine Diagnostik und Symptomatologie der Sehstörungen. Price M.22.40, or £1 2s. 6d.

Sexualleben und Nervenleiden. Die Nervösen Störungen Sexuellen Ursprungs. Nebst einem Anhang über Prophylaxe und Behandlung der Sexuellen Neurasthenie. Von Dr. L. Löwenfeld, Spezialarzt für Nervenkrankheiten in München. Price M.7., or 7s.

Diagnose der Chirurgischen Nierenerkrankungen unter Verwertung der Chromocystoskopie. Von Dr. Fritz Voelcker, Privatdozent für Chirurgie in Heidelberg. Price M.4.60, or 4s. 9d.

Über die Geographische Verbreitung und die Diagnose des Ulcus Ventriculi Rotundum. Mit besonderer Berücksichtigung des Chemischen Verhaltens des Magensaftes und der Occulten Blutungen. Ein Beitrag zum Regionären klinischen Verhalten des Magengeschwürs. Von Dr. L. Rütimeyer, Dozent in Basel. Price M.3.60, or 3s. 9d.

Die Krankheiten des Magens und ihre Behandlung. Klinische Vorträge für Studierende und Aerzte. Von Dr. Louis Bourget, Professor und Direktor der Medizinischen Universitätsklinik in Lausanne. Price M.4.60, or 4s 9d.

Über Augenerkrankungen Sexuellen Ursprunges bei Frauen. Von Dr. Emil Berger, Ausländ. Korrespond. Mitglied der Kgl. Belgischen und Kgl. Spanischen Akademie der Medizin, und Dr. Robert Loewy, Chef-Adjoint der Universitätsklinik für Gynäkologie in Paris. Deutsche, zum Teile neubearbeitete Ausgabe. Übersetzt von Dr. Beatrice Rosabach, Frauenärztin in Madison (Vereinigte Staaten). Price M.4., or 4s.

ENKE, FERDINAND, Stuttgart.

Geschichte der Medizin. Von Dr. Max Neuburger, a.o. Professor für Geschichte d. Medizin an der k.k. Universität in Wien. Zwei Bände. I. Band. Price M. 9, or 9s.

FISCHER, GUSTAV, Jena.

Die Morphologie der Missbildungen des Menschen und der Tiere. Die Doppelbildungen. Von Dr. Ernst Schwalbe, a.o. Professor der Allgemeinen Pathologie und Pathol. Anatomie an der Universität Heidelberg. Price M.11.

GARDEN CITY ASSOCIATION, 602-3, Birkbeck Bank Chambers, Holborn, London, W.C.

The Garden City Movement. By G. Montague Harris, M.A. With a Preface by Ebenezer Howard. Second edition. Price, paper, 6d; cloth, 1s.

Housing in Town and Country. Being a Report of a Conference of the Garden City Association held in the Grand Hall, Criterion Restaurant, London, on March 16th, 1906. Price, paper, 6d.; cloth, 1s.

GILL, L. UPCOTT, Bazaar Buildings, Drury-lane, London, W.C. (CHARLES SCRIBNER'S SONS, New York).

Tennis Topics and Tactics. By F. W. Payn, B.A., LL.M., late Whewell Scholar of International Law in the University of Cambridge. Price 6s. net.

HARRISON AND SONS, 45, Pall Mall, London.

Glimpses of American Surgery in 1906. By C. Hamilton Whiteford, M.R.C.S., L.R.C.P. Price 2s. net.

IMPRIMERIE OSMANIÉ, Constantinople.

Annales Médicales et Bulletin de Statistique de l'Hôpital d'Enfants Hamidié. Publié le Jour Anniversaire de l'Avènement au Trône de S.M.I le Sultan, sous la Direction du Médecin en Chef en Collaboration avec les Médecins de l'Hôpital. VIIme Année. Price not stated.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

An Introduction to Physiology. By William Townsend Porter, M.D., Associate Professor of Physiology in the Harvard Medical School. Price not stated.

KARGER, S., Berlin (WILLIAMS AND NORGATE, 14, Henrietta-street, Covent Garden, London, W.C.).

Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Erkrankungen des Urogenital Apparates. Redigiert von Geh. Med. Rat. Prof. Dr. M. Nitze in Berlin und Dr. S. Jacoby in Berlin. Nach Nitzes Tode unter Mitwirkung von Prof. Dr. A. Kollmann in Leipzig. I. Jahrgang: Bericht über das Jahr 1905. Price not stated.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Dryden House, 43, Gerrard-street, London, W.

What are We? An Attempt at an Intelligible Exposition of the Universe and the Place We Take Therein. By Leonard Joseph, A.M.I.E.E. Price 15s. net.

LAURIE, T. WERNER, 13, Clifford's Inn, Fleet-street, London, E.C.

Literary London. By Elsie M. Lang. With an Introduction by G. K. Chesterton and 42 photographs specially taken for this book by W. J. Roberts. Price 6s. net.

The Cathedrals of Northern Spain: their History and their Architecture; together with much of Interest concerning the Bishops, Rulers, and other Personages identified with them. By Charles Rudy. Price 6s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

Stray Thoughts in Sickness and in Health. By Lucy H. M. Soulsby. Price 2s. 6d. net.

Transactions of the Clinical Society of London. Vol. XXXIX. Price not stated.

MARLBOROUGH, E., AND CO., 51, Old Bailey, London, E.C.

Tamil Grammar Self-taught. (In Tamil and Roman Characters.) By Don M. de Zilva Wickremasinghe, Epigraphist to the Ceylon Government, Librarian and Assistant Keeper of the Indian Institute, Oxford. Price, wrapper, 4s.; cloth, 5s.

MUNICIPAL PRINTING OFFICE, Boston, Massachusetts, U.S.A.

A History of the Boston City Hospital from its Foundation until 1904. Authorised by the Trustees and edited by a Committee of the Hospital Staff, David W. Cheever, M.D., A. Lawrence Mason, M.D., George W. Gay, M.D., and J. Bapst Blake, M.D. Price not stated.

OLDENBOURG, R., München und Berlin.

Die Schwachstromtechnik in Einzeldarstellungen. Herausgegeben von J. Baumann und Dr. L. Rellstab. Band III. Medizinische Anwendungen der Elektrizität. Von M. U. Dr. S. Jellinek, Assistent des k.k. Krankenhauses Wieden in Wieden, beeideter ärztlicher Sachverständiger für elektrisches Unfallwesen beim k.k. Landesgericht Wien. Price M.10.

REBMAN, LIMITED, 129, Shaftesbury-avenue, London, W.C.

The Principles of Qualitative Analysis from the Standpoint of the Theory of Electrolytic Dissociation and the Law of Mass Action. By William Böttger, Privat-docent in the University of Leipzig. Translated with the Author's sanction and revised with his coöperation by William Gabb Smeaton, Instructor in General Chemistry in the University of Michigan. Price 9s. net.

SHERRATT AND HUGHES, 34, Cross-street, Manchester, and 60, Chandos-street, London, W.C.

Polypus of the Nose. By Eugene S. Yonge, M.D. Edin., Honorary Assistant Physician, Manchester Hospital for Consumption and Diseases of the Throat. Price 2s. 6d. net.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, Paternoster-row, London, E.C.

For the Quiet Hour. Selected by J. E. and H. S. Price 1s. net.

SMITH, ELDER, AND CO., 15, Waterloo-place, London, S.W.

Sir Nigel. By Arthur Conan Doyle, author of "The White Company," &c. Price 6s.

VIGOT FRÈRES, 23, Place de l'Ecole-de-Médecine, Paris.

La Régénération des Familles et Races Tarées. Prophylaxie et Hygiène Thérapeutique de l'Hérédité Morbide. Price Fr. 2.50.

L'Évaluation des Incapacités Permanentes basée sur la Physiologie des Fonctions Ouvrières des Diverses Parties du Corps. Par le Dr. Ch. Remy, Professeur Agrégé à la Faculté de Médecine de Paris, Membre de la Société de Biologie, Chirurgien Honoraire de la Maison Départementale de la Seine. Price Fr. 4.

VOGEL UND KREIENBRINK, Berlin, W. 30.

Die Seereisen zu Heil- und Erholungszwecken, ihre Geschichte und Literatur. Von Sanitätsrat Dr. Edmund Friedrich in Dresden. Price not stated.

WILSON, HEFFINGHAM, 54, Threadneedle-street, London, E.C.

Lawyers and their Clients. A Practical Guide for the Latter Second edition. Price 2s. net.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 21ST.

The Case of an Irish Medical Officer.

Mr. FETHERSTONHAUGH asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that Mr. J. M. Carr, late medical officer of Tullyvin dispensary district, Cootehill Union, was recently compelled, owing to old age, and after long service, to resign his appointment; that he applied to the guardians for a pension and they refused it; and that on Oct. 27th he became a pauper inmate of the union workhouse; and whether the Government proposed to take any steps to improve the position of Irish Poor-law medical officers, particularly as to the right to pension after long service, which was at present left entirely to the discretion of the guardians to grant or refuse.—Mr. BRYCE answered: I am informed that in July last Mr. Carr was called upon to resign, but not on account of old age or after long service. He had been appointed in 1902 when he was 59 years of age and had therefore served only four years. It is the fact that the guardians have refused to grant Mr. Carr a superannuation allowance and the Local Government Board understands that he is now an inmate of the workhouse. Recommendations as to the Irish Poor-law medical service are made in the recently presented report of the Irish Poor-law Commission, but as I have already stated that report will require very full consideration and I do not anticipate that I shall be in a position to make any statement upon the subject for some time to come.

County Councils and the Training of Midwives.

Mr. BATEMAN HOPE asked the President of the Local Government Board whether the Board had formed the opinion that it was illegal for county councils to pay for the training of midwives either out of the county fund or out of the funds set apart for the purposes of higher education; and, if so, on what grounds.—Mr. BURNS replied: It would seem to the Local Government Board to be competent for a county council to incur expenditure for this purpose in exercise of the powers conferred on it by Section 2 of the Education Act, 1902, if after consultation with the Board of Education it appeared to it desirable to do so. But it is not aware of any legal authority which would enable a county council to incur any such expenditure apart from these powers.

THURSDAY, NOV. 22ND.

A Medical Magistrate.

Mr. WARDLE asked the President of the Local Government Board whether his attention had been called to the action of the medical officer of health at Kirkby Stephen who during July or August of this year sentenced a refractory pauper to one month's imprisonment in his capacity as a county magistrate; and whether he proposed to take any action in the matter in view of the dual position held by this medical officer of health.—Mr. BURNS replied: I have no information as to this particular case, but I may say generally that as the medical officer of health is the officer of the county or district council and not of the board of guardians it does not at present appear to me that there is any objection to his acting as a county magistrate in a case of the kind referred to in the question.

Vaccinal Condition of Victims of Small-pox.

Mr. LUPTON asked the President of the Local Government Board whether his attention had been called to the letter of Dr. J. F. W. Tatham published in the sixty-seventh annual report of the Registrar-General, in which Dr. Tatham repeated his request, often made before, that in the case of persons dying from small-pox there should be a precise statement of the vaccinal condition of each person; and whether, with a view to facilitating the granting of this request, he would in the case of each person dying from small-pox cause the vaccination registers to be searched in order to assist in ascertaining the vaccinal condition of the deceased person.—Mr. BURNS, answering, said: I have seen the passage in the report of the Registrar-General referred to. In reply to a question by my honourable friend on July 14th I pointed out the objections to a proposal that vaccination registers should be examined in all cases of small-pox to ascertain the vaccinal condition of the patient. Similar objections would apply to the present proposal and I am afraid it must be regarded as impracticable.

Suggested Uniform System of Meat Inspection.

Mr. ALDEN asked the President of the Local Government Board whether it would be possible by administrative changes to secure a uniform meat inspection for the whole of London; and, if not, whether he would be willing to introduce the necessary legislation with a view to this result.—Mr. BURNS replied: Probably legislation would be necessary to secure a complete system of uniform inspection. The matter is not being lost sight of, but it does not appear to be ripe for legislation at present.

Cancer Research.

Mr. B. S. STRAUS asked the Secretary of State for the Home Department whether he could arrange that in future, when the Registrar-General issued his report upon deaths and their causes, he would issue statistics showing the geographical distribution of deaths from cancer in the United Kingdom and in London, in order to assist in the discovery of the cause of this disease.—Mr. BURNS, who answered, said: I think that so far as England and Wales are concerned my honourable friend will find the information he desires in the reports of the Registrar-General at the present time. I would draw his attention to the tables on pages 234 to 270 of the last of these reports.

MONDAY, NOV. 26TH.

The Cleansing of Rag Flock.

Mr. LYULPH STANLEY asked the President of the Local Government Board whether it was the intention of his department, either by legislation or otherwise, to prohibit the use of rag flock in the making of bedding without first subjecting it to some cleansing and disinfecting process.—Mr. BURNS replied: The compulsory cleansing of rag flock could not be generally secured under the existing law. I am not at present in a position to promise legislation on the subject, but the point has been noted for consideration when a suitable opportunity offers.

The Geographical Distribution of Cancer.

Mr. B. S. STRAUS asked the President of the Local Government Board whether he could arrange that in future the Registrar-General would, when he issued his report upon deaths from cancer, show the geographical distribution of such deaths, clearly stating the districts of each town or centre where these deaths occur.—Mr. BURNS answered: The Registrar-General's reports already give statistics as to the deaths from cancer in respect of each registration district, but he informs me that he has no materials at his command which would enable him to supply statistics of this kind in respect of the areas referred to in the question.

TUESDAY, NOV. 27TH.

Relief of Sickness in Whitechapel.

Mr. ALDEN asked the President of the Local Government Board whether he would take steps to secure that in cases of serious or

infectious sickness (including phthisis, tuberculosis, measles, whooping-cough, and chicken-pox) of persons destitute of the means of obtaining a medical attendant otherwise, the Whitechapel guardians or their relieving officers would give orders for the district medical officer to visit such persons at the beginning of the sickness instead of waiting till the sickness was urgent. Mr. BURNS said: I am informed that in all cases of sickness at Whitechapel the relieving officers on application give orders for the district medical officers to visit. There is no delay pending inquiries into the cases. These are made afterwards. The district medical officer visits when he receives the order. There is no question of waiting until the sickness becomes urgent.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAM, BASIL JOHN, M.B., Ch.M. Glasg., has been appointed Officer of Health for Shire of Eltham, eastern Riding, Victoria, Australia.

BATLEY, HARRY, L.S.A., has been appointed Assistant Medical Officer to the Warneford Hospital for Mental Diseases, Oxford.

BOND, C. HUBERT, D.Sc., M.D. Edin., has been appointed Medical Superintendent of the New Asylum for the County of London at Long Grove, Epsom.

BOND, FRANCIS THOMAS M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health by the Thornbury (Gloucestershire) Board of Guardians.

DODD STANLEY, M.B., B.C. Cantab., has been appointed Obstetric Tutor at Westminster Hospital.

FEDDEN, W. FEDDE, M.S., M.B. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon at St. George's Hospital.

FEILCHENFELD, EDWARD, M.B., B.Ch. Melb., has been appointed Government Medical Officer and Vaccinator at Hay, New South Wales, Australia.

FERNIE, ANDREW, L.R.C.P. & S. Edin., L.F.P.S., L.M. Glasg., has been appointed District Medical Officer of the Cricklade and Wootton Bassett (Wilts) Union.

GRAKE, G. B., L.D.S. Eng., has been appointed House Surgeon to the Royal Dental Hospital of London and London School of Dental Surgery.

GIBLING, C. J., M.B. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Cranborne District of the county of Dorset.

GRANT, J. DUNDAS, M.D., F.R.C.S. Eng., has been appointed Surgeon to the Throat and Ear Department of the Hospital for Consumption, Brompton.

HORTON-SMITH-HARTLEY, P., M.D., B.C. Cantab., M.V.O., has been appointed a Physician to the Hospital for Consumption, Brompton.

JACKSON, H. E., L.D.S. Eng., has been appointed House Surgeon to the Royal Dental Hospital of London and London School of Dental Surgery.

KIDD, PERCY, M.D., F.R.C.P. Lond., has been appointed Consulting Physician to the Hospital for Consumption, Brompton.

MAGUIRE, M. J., L.D.S. Eng., has been appointed House Surgeon to the Royal Dental Hospital of London and London School of Dental Surgery.

MARES, HERBERT W. J., M.D., B.S. Cantab., has been appointed Assistant Surgeon for Diseases of the Ear, Nose, and Throat at the Royal Prince Albert Hospital, Sydney, Australia.

MCLEAN, GEORGE, M.B. Syd., has been appointed Government Medical Officer and Vaccinator at Gunnedah, New South Wales, Australia.

PITTS, A. T., L.D.S. Eng., has been appointed House Surgeon to the Royal Dental Hospital of London and London School of Dental Surgery.

ROBERTSON, W. G., M.B., Ch.B. Edin., has been appointed House Surgeon at the Hartlepools Hospital.

SCARGILL, W. HAROLD, M.B., B.S. Leeds, has been appointed Clinical Assistant to the Leeds Hospital for Women and Children.

SIMPSON, W. B., M.B., M.S., D.P.H. Aberd., has been appointed Medical Officer of Health of Grimsby.

SKINNER, GEORGE HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Officer of Health for Shire of Glenelg, Victoria, Australia.

SOUTHERN, W. D., L.D.S. Eng., has been appointed House Surgeon to the Royal Dental Hospital of London and London School of Dental Surgery.

STEVEN, J. LINDSAY, M.D. Glasg., F.F.P.S. Glasg., has been appointed Visiting Physician to the Western Infirmary, Glasgow.

TUCKER, JOSEPH, M.R.C.S., L.S.A., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Chulmleigh District of the county of Devon.

WALL, R. CECIL B., M.D., B.Ch. Oxon., has been appointed Assistant Physician to the Hospital for Consumption, Brompton.

WHALLEY, FREDERICK M.B., Ch.B. Leeds, has been appointed House Surgeon at the Leeds Hospital for Women and Children.

WHITE, DOUGLAS OAKLEY, M.B., Ch.B. Melb., has been appointed Public Vaccinator for the South-Western District of Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD BOROUGH HOSPITAL.—Senior and Junior House Surgeons. Salaries £100 and £80 per annum, with fees, board, and residence.

BLACKBURN COUNTY BOROUGH, EDUCATION COMMITTEE.—Assistant to the Medical Officer of Health. Salary £150 per annum.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon. Salary £20, with board, lodging, and washing.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Second Honorary Anæsthetist.

BRISTOL GENERAL HOSPITAL.—Senior House Surgeon. Salary £150 per annum, with board, residence, &c.

BRITISH LYING-IN HOSPITAL, Endell-street, W.C.—Physician to Out-patients.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with rooms, board, washing, and attendance.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried. Salary £150, with board, apartments, attendance, and washing.

GLASGOW UNIVERSITY.—Examiner in Zoology. Salary £50, with hotel and travelling expenses. Also Examiner in Physiology. Salary £50, with hotel and travelling expenses.

GRAVESEND HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Physician.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Medical Registrar. Honorarium 50 guineas. Also Resident Medical Superintendent. Salary 100 guineas per annum, with board and residence. Also House Surgeon for six months. Salary £20, with board and residence.

HULME DISPENSARY, Dale-street, Stretford road, Manchester.—House Surgeon. Salary £150 per annum, with apartments, attendance, coal, and gas.

INDIAN MEDICAL SERVICE, India Office, London.—Examination for not less than 18 Commissions.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—Third House Surgeon. Salary £50 per annum, with board, washing, and residence.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY. Resident House Surgeon. Salary £80 a year, with rooms, attendance, and board.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

MIDDLESEX HOSPITAL. Medical Officer and Registrar to the Cancer Department. Salary £100 per annum, and board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Honorary Physician to Out-patients.

MILROY LECTURES ON STATE MEDICINE AND PUBLIC HEALTH.—Milroy Lecturer for 1908.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary £70 per annum, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road.—Surgical Registrar. Assistant Anæsthetist, Clinical Assistants, also Junior Obstetric Assistant (all females).

ST. PANCRAS INFIRMARY (NORTH), Dartmouth Park-hill, N. Junior Assistant Medical Superintendent. Salary £75, with apartments, rations, and washing.

SALFORD ROYAL HOSPITAL.—Senior House Surgeon, House Physician, Accident House Surgeon, and Junior House Surgeon, all for six months. Salaries at rate of £100, £90, £80, and £50 per annum respectively, with board and residence.

SALISBURY, FISHERTON ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £120 per annum, with board, apartments, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum.

THROAT HOSPITAL, Golden-square, W.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry allowance.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Terms £70 per annum, with rooms, board, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Normanton, in the county of York.

Births, Marriages, and Deaths.

BIRTHS.

EASTERBROOK.—At Ayr, on the 25th November, the wife of C. C. Easterbrook, M.D., F.R.C.P. Edin., of a daughter.

NASH.—On Nov. 25th, at Clavering House, Bedford, the wife of W. Gifford Nash, F.R.C.S., of a son.

PRICE.—On Nov. 23rd, at Uppermill, Saddleworth, Yorks, the wife of David Price, M.R.C.S., L.R.C.P., of a daughter.

YELD.—On Nov. 22nd, at Gloucester-road, Regent's Park, the wife of Walter H. Yeld, M.R.C.S., L.R.C.P. Lond., of a son.

DEATHS.

BOTHAMLEY.—On Nov. 25th, at 10, Gosberton-road, Balham, Elizabeth Ann, wife of the late William Parkinson Bothamley, M.R.C.S., L.S.A., aged 53 years, of pneumonia.

KIRTON.—On Nov. 15th, at Cairo, Egypt, Joan, daughter of Rex and Nellie Kirton.

MCDOWALL.—At Menston, on Nov. 21st, suddenly, of heart failure, John Greig McDowall, M.D., Medical Superintendent of the West Riding Asylum, Menston, aged 55 years.

SYMES-THOMPSON.—On Nov. 24th, at Cavendish-square, Edmund Symes-Thompson, M.D., F.R.C.P., aged 69 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

QUACK MEDICINE VENDOR SENTENCED TO IMPRISONMENT.

AT Lewes assizes on Nov. 26th a quack of the name of William Henry Hawkins, aged 62 years, pleaded guilty to a charge of fraud and his son, charged with conspiring with him in the same matter, was acquitted, no evidence being offered against him. The father was sentenced to three months' imprisonment with hard labour, Mr Justice Lawrance, who expressed sympathy with the desire of the prosecution to put a stop to the kind of imposture practised, being apparently moved to leniency by the fact that this was the first case of the sort undertaken by the Treasury. It is to be hoped that it will not be the last and that, as persons of the class most liable to be deceived by the monstrous advertisements of quacks are those to whom the study of criminal cases in the newspapers most appeals, the knowledge of the methods of quack medicine vendors will now be widely diffused. Hawkins carried on his trade at Brighton and sold powders which he advertised as capable of curing all evils under the sun, including "confusion of ideas" and "wasting of the muscles." The alleged properties of these were made known to his dupes by circulars, and at his manufactory a staff of five clerks was kept busy sending these out. They were despatched by hundreds, a sack and a cart being sometimes called into requisition for the posting of the circulars and of the replies sent to the letters which they evoked. The circulars included the usual "testimonials" from imaginary patients, and part of the system consisted in advertisements supposed to emanate from clergymen pretending to be anxious to make known to sufferers the means by which they themselves had obtained relief. Various absurd titles were given to the powders, one of which was stated to have been discovered by a priest in South America and the other to have been made known by a Franciscan monk in West Africa. A post-office order for 17*s.* 3*d.* sent by a detective brought in return 28 powders, the approximate cost of which to the vendor was estimated to be 1*d.* They consisted of a mixture of bicarbonate of sodium and bromide of potassium, the average weight of each being 31½ grains. Another package of powders similarly obtained was sold under a different name, but the ingredients were the same in different proportions, with the addition of a small amount (about 4 per cent.) of cinchona bark. A circular stated that an ordinary druggist would ask 28*s.* for making up the powders offered, "but our price is 18*s.* 9*d.*, which really is cost price." Certainly the quack who is so free and so definite in his statements as this should stand little chance should he be prosecuted, and it is to be hoped that the Treasury may be encouraged by its success and by the approval which it deserves to examine and to bring to light the practices of other members of the same iniquitous fraternity. The quack medicine vendor deprives a dupe who has nothing the matter with him of his money only; in other cases the compound sold may do actual harm or the patient may be delayed in seeking medical advice when he is seriously in need of it.

A QUESTION IN ETHICS.

A LIVERPOOL medical man has sent us a leaflet reprinted from the *Liverpool Daily Post and Mercury* and asks our opinion as to the professional propriety of the said leaflet being wrapped round jars of jam and marmalade. It appears that in the summer, when there were many disquieting reports concerning the sanitary provisions and general conditions of labour in food factories—British as well as American—three Liverpool medical men, accompanied by a lay member of the health committee of the corporation, made an investigation of certain Liverpool jam factories. As a result they gave the factories an excellent testimonial for cleanliness, good ventilation, and so on, dwelling also on the wholesome appearance of both the fruit and the workers. Their opinion is now spread widely by being printed upon all the wrappers of the manufacturers' jars and we have been invited to say whether the publicity thus given to the medical men's names is professionally correct. Our view is that it would probably be advisable for the consultant physicians in question, who are not experts upon the details of factory management, to state that the publicity which has been thrust upon them is not their fault.

THE PUBLIC SALE OF MEAT SELECTED FROM CONDEMNED CARCASSES.

IN an article on the slaughtering of animals and the sale of meat, the *Scientific American* of Nov. 10th states that the public abattoirs of Germany are models of construction and management. Even so late as 25 years ago Germany possessed few public abattoirs, but now there are more than 400 in Prussia alone. A peculiar German institution which has been introduced into some other European countries is the freibank, or shop devoted to the public and official sale of condemned meat, which has, theoretically, been made wholesome by sterilisation. Sometimes the freibank is attached to the sanitary department of the abattoir and is under the control both of the police and of the inspection service of the abattoir; sometimes it is in the city, in which case the supervision of the inspectors is less strict. But in every case the meat is sterilised in the sanitary department of the abattoir. The price of meat sold at the freibank is fixed by the local authorities, and the quantity sold to a single purchaser is limited—usually to about six pounds. This restriction is an obstacle to the use of the meat in restaurants and boarding-houses. In Saxony in the year 1902, of each 100 animals slaughtered 93 were admitted to unrestricted sale and the equivalent of five and a half carcasses was sold at the freibank, the remaining one and a half carcasses having presumably been condemned beyond redemption. More than 3,000,000 pounds of meat are sold each year in the freibänke of Berlin.

CENSORIOUS.

WE have received from a correspondent writing from the Post-Graduate College of the West London Hospital Hammersmith-road, a request to explain the difference between "the performances of Dr. Bodie and a course of four lectures at 3*s.* per head per lecture advertised in your columns." Our critic goes on further to say, "From a description in the *Daily Mail* I understand that both performer and lecturer have much in common with the showman. The fact that one holds an English and the other an American qualification cannot surely alter your censure or commendation." The parallel appears to have been drawn by our correspondent in complete ignorance of the facts. On the strength of a paragraph in the *Daily Mail*, reference to which he does not give, he seeks at one and the same time to exalt the work of a quack and to call in question the *bona fides* of a professional colleague. If he had studied our columns instead of being over-impressed by what he appears to have read in the *Daily Mail*, or seen upon music-hall posters, he would have understood the difference which he asks us to explain to him. We must not be construed as approving of public exhibitions of their therapeutic powers by medical men, and we can see that objectionable features might be introduced into such lectures as those advertised in our columns. But until a medical man has erred it is an offence in manners and an error in judgment to compare him to the person whom our correspondent styles Dr. Bodie and credits with a medical qualification.

AN ERROR IN RITUAL.

To the Editors of THE LANCET.

SIRS,—The following was told me by a friend, a local clergyman. He was taking duty at a village in Cheshire when a woman from the village came to him and asked him to *vaccinate* her baby. He naturally advised recourse to the medical man. Her reply was, "But Mr. X (the vicar whose duty my friend was taking) always does it." After some discussion it turned out that the woman meant baptise, not vaccinate.

I am, Sirs, yours faithfully,

W.

MODERN COMMERCIAL METHODS AND THE POST OFFICE.

THE extension of Post Office facilities has led to the ordinary citizen being pestered with advertisements of all kinds which arrive through the post. Most of them if annoying are harmless, but there is a class of advertisement sent by post which is distinctly harmful. Certain persons watch the "Births" column in the daily press, and as soon as they see a birth announced send to the parents advertisements of a filthy and sometimes of an illegal kind. Thus a correspondent whose wife bore him a child some two months ago has forwarded to us two odious circulars which he received by post. Similar communications have, he says, arrived every week since the birth was inserted in the paper. One of these advertisements is filthy but so far as the goods go does not incite to illegal practices. The other is filthy and illegal. The first emanates from a man named John Mellinger, whose address is 140, Palmer's-road, New Southgate, London, N., and is a list of preventives which, together with the way to use them, are described in detail. The other circular is sent out by The Lady's Remedy Company, 4*a*, Brondesbury road, Kilburn, London, N.W., and this one, besides advertising "preventives," recommends "Ladies' Capsulettes" which remove all obstructions. These, of course, are sold and bought as abortifacients. The individual trading as the last-named company could, we think, be proceeded against for felony; as for Mellinger, the Post Office Protection Act might well be brought to bear upon his dirty business.

THE STAINING AND MICROSCOPICAL EXAMINATION OF RINGWORM SPORES.

To the Editors of THE LANCET.

SIRS,—I shall be exceedingly obliged if you will kindly advise me on the following points: 1. What stain is considered the best for showing ringworm spores? 2. Which is the best book on staining and the microscopical examination of ringworm spores?

I am, Sirs, yours faithfully,

Nov. 21st, 1906. J. B.

*** 1. The best method of staining hairs to show ringworm spores is the following:—(*a*) Soak in ether for five minutes to remove the fat; (*b*) stain in a liquid composed of one part of a 5 per cent. alcoholic solution of gentian violet and three parts of aniline water: the time necessary varies from five minutes to an hour; (*c*) dry and then decolourise with Gram iodine solution; (*d*) clear with aniline

oil; (e) wash in xylol; and (f) mount in xylol balsam. The spores are stained blue. If it be desired that microphotographs be taken a 2 per cent. solution of carbol fuchsin can be used in place of the gentian violet. By this method the spores are stained red. 2. Each of the following books contains a good account of the staining and microscopical examination of ringworm spores: "Ringworm in the Light of Recent Research," by Malcolm Morris; "Handbook of the Pathology of the Skin," by J. M. H. MacLeod. Most modern treatises on diseases of the skin contain an account of the methods employed.—ED. L.

VILLAGE LIFE AND THE DRAMA.

EVERY medical man who takes an interest either in his profession or in his country's welfare must regret the modern tendency, which is so evident in all lands, of the population to leave the country and to crowd into the towns. One great reason of this is said to be the want of amusement in the country. Everyone will remember the late Lord Salisbury's wise dictum that a parish circus would be infinitely more popular than a parish council. In the old days before the Puritan domination had crushed out innocent as well as harmful amusements the villages had a variety of more or less dramatic entertainments, such as mystery-plays, morris-dancers, mummers, and the like, which afforded a great deal of healthful pleasure. An effort to resuscitate these entertainments is now being made by an association, a letter from which lies before us. The association has taken the name of the Dramatic Revival Society and its first object is "to facilitate and encourage amateur dramatic representations throughout the country, especially in villages by the villagers themselves, and in schools by the scholars, for purposes of education and recreation." The society hopes in this way to give a new stimulus to the methods of elementary education, to provide recreation for rural districts, to popularise among the British people the dramatic masterpieces of all times and countries, and to assist in the revival and production of pageants, mystery, morality, lyrical, and poetical plays, and to encourage dramatic experiments of untried authors. Everyone knows that the various historical pageants which have been held of late, such as those at Sherborne and Warwick, have been eminently successful, and there is at least one artistic guild working upon commercial principles—viz., the Guild of Handicraft—the members of which perform dramatic representations written for the most part by their own members. While not taking such a hopeful view of the movement as the writers of the circular appear to do, we wish them every success for any movement which will remind the modern man of the past history of his country, of the great deeds of his forefathers, and of spiritual enjoyments as opposed to his ordinary carnal ones, and which will make life happier and therefore more healthy. Especially will this be so if the movement induces the rural population to stay in the country and not flock to the already overcrowded towns. In case any of our readers should feel inclined to seek further information upon the subject the founders of the movement are Mr. F. R. Benson, Mr. J. T. Grein, Mr. E. H. Burrows, and Mr. W. T. Stead, and the address is Mowbray House, Norfolk Street, Strand, London.

THE CASE OF MR. PEERS.

To the Editors of THE LANCET.

SIRS,—I have received and beg gratefully to acknowledge the following contributions towards the fund being raised for Mr. Peers. Any further sums received by me will be acknowledged at a later date.

I am, Sirs, yours faithfully,

278, Old Kent-road, London, S.E., Nov. 27th, 1906. C. H. PRING.

	£	s.	d.		£	s.	d.
Dr. H. Montague Murray	2	2	0	Dr. Walter W. H. Tate ...	1	1	0
Dr. G. H. O'Reilly	1	0	0	Mr. A. Langley	1	1	0
Dr. Hugh J. M. Playfair...	1	1	0	Mr. J. F. Williams	1	1	0

CURIOUS NAMES.

A CORRESPONDENT writes to inform us that he recently saw hanging up on a cottage wall a memorial card relative to the death of a man who bore the extremely unusual name of Acteyner Enoch Pickering. The owner of the cottage said that the man was her nephew and that there was no mistake about the name. It was pronounced just as spelled, with the y like a long i and the second c soft. Our correspondent suggests that the name may be an imperfectly remembered Biblical name, which looking to the Enoch is possible, although we have been unable to find any name resembling it in the Concordance. Perhaps some of our readers may have come across this or a similar name and, if such be the case, will kindly let us know.

A NEW BED STUFFING.

UNDER the above heading we referred in THE LANCET of Sept. 8th, p. 698, to a sample of bedding material submitted to us by Mr. Thomas Heard, of Albert House, Regent-street, Cheltenham, which appeared to us to be an admirable material for the purpose of stuffing mattresses. Its quality of keeping quite dry is remarkable, and recently we made an experiment with a section of a mattress filled with this vegetable flock. Left in contact with water for several hours there was no indication at all of any water having been absorbed at the end of that time. The material is beautifully silky and soft and seems to us to be very suitable for the purpose proposed.

Celsus has asked us a rather difficult question, to which we will reply next week.

Medicus has omitted to furnish his name and address.

ERRATUM.—In the title heading a paper on Stokes-Adams Disease and Cardiac Arrhythmia by Dr. John Hay and Dr. Stuart A. Moore, published in THE LANCET of Nov. 10th (p. 1271), Dr. Hay was described, *inter alia*, as President of the Manchester Microscopical Society. This description should have been "President Elect of the Liverpool Microscopical Society."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond street (3 P.M.).

TUESDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (5th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M., Ophthalmic, 1 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (8th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (3rd).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M.: Special Meeting. Address:—Dr. Hartmann (Paris): The Surgical Forms of Ileo-cæcal Tuberculosis.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Cantor Lecture:—Mr. A. D. Hall: Artificial Fertilisers, their Nature and Functions.

TUESDAY (4th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Papers:—Mr. E. M. Corner: Lateral Fractures of the Axis.—Dr. N. Dalton: Lymphosarcoma of the Stomach and Abdominal Glands.—Dr. J. J. Perkins and Dr. L. S. Dudgeon: Eosinophilic Pleurisy.—Dr. Seligmann: Infective Tumours in Dogs from British New Guinea.

WEDNESDAY (5th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M.: Specimens will be shown by Dr. Handfield-Jones, Dr. H. R. Spencer, Mr. J. H. Targett, and Dr. W. A. Potts (introduced by Dr. Stevens).—Paper:—Dr. V. Bonney: The Treatment of Ovarian Prolapse by Shortening the Ovarian Ligament.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Colonel Sir C. M. Watson, K.C.M.G., C.B.: The Metric System.

THURSDAY (6th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8.30 P.M.: Exhibition of Clinical Cases. Patients in attendance at 8 P.M.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M.: Discussion on Notes from a Children Clinic (opened by Dr. Reginald Brown).

FRIDAY (7th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Miller Hospital, Greenwich-road, S.E.).—8.45 P.M.: Purvis Oration:—Dr. A. M. Hobson: Operative Treatment of Acute General Peritonitis. Conversazione.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Exhibition of Cases and Specimens.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Papers by Dr. Ll. Powell, Dr. G. H. A. Barton, Mr. A. de Pomerville, and Mr. L. K. Thomas.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—12 noon: Pathological Demonstration:—Dr. G. C. Low. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Mr. P. Dunn: Diseases of the Eye. 5 P.M.: Lecture:—Dr. Ball: Practical Points in the Anatomy of the Ear (illustrated with lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. G. Little: Clinique. (Skin.) 5.15 P.M., Lecture:—Mr. T. Walker: On the Methods of Estimating the Functions of the Kidneys.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. St Clair Thomson: Throat and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

TUESDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Moullin: Gynæcology. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. Ball: Practical Points in the Anatomy of the Ear (illustrated with lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. W. Carr: Clinique. (Medical.) 5.15 P.M.: Lecture:—Mr. F. Eve: Some Points in the Pathology and Operative Treatment of Tumours of the Superior Maxillæ and Nose.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. R. Russell: Syringomyelia.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Fairbank: Demonstration (Orthopædic). (Post-Graduate Course.)

CENTRAL LONDON OPHTHALMIC HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Mr. Wells and Mr. Maclehose: Classes of Instruction in the Use of the Ophthalmoscope, with Demonstrations of Cases.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M.: Lecture:—Dr. A. J. Whiting: Some Common Angio-neuroses

WEDNESDAY (5th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. 5 P.M.: Clinical Lecture:—Mr. Pardoe: The Treatment of Simple and Malignant Growths of the Prostate.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. C. Ryall: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. E. F. Buzzard: Syphilis of the Nervous System.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. F. Taylor: Medicine. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M.: Lecture:—Dr. F. J. Wethered: Demonstration of Cases in the Wards.

THURSDAY (6th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. P. Dunn: Diseases of the Eye. 5 P.M.: Lecture:—Mr. S. Edwards: Urinary Cases

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.)

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Demonstration:—Dr. Fenton: (Medical). (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M.: Chesterfield Lecture:—Dr. M. Dockrell: Fungous Diseases of the Hair: Hyphogenic Sycosis; II., Tinea.

WEST END HOSPITAL FOR NERVOUS DISEASES (Welbeck street, W.).—5 P.M.: Lecture:—Dr. H. Macnamara: Habit Spasm.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—5 P.M.: Lecture:—Mr. A. Doran: Pregnancy and Labour in Relation to Ovarian and other Tumours.

FRIDAY (7th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Moullin: Gynæcology. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. Abraham: Cases of Skin Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. L. Lack: Clinique. (Throat.)

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. R. Russell: Subacute Degeneration of Cord.

SATURDAY (8th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

During the week marked copies of the following newspapers have been received *Halifax Courier, Dundee Advertiser, Whitby Gazette, Surrey Advertiser, Southwark and Bermondsey Recorder, Yorkshire Post, Westminster Gazette, Sheffield Telegraph, Dublin Times, Belfast Whig, Cardiff Times, Belfast News, The Tribune, Glasgow Herald, Leicester Post, Cardiff News, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office, Nov. 29th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 23	30·520	S.W.	...	59	55	51	52	53	Overcast
,, 24	30·532	S.W.	...	54	53	48	48	49	Overcast
,, 25	30·490	S.W.	...	52	50	47	46	47	Overcast
,, 26	30·470	S.W.	...	56	55	42	42	42	Foggy
,, 27	30·010	W.	...	72	57	42	53	55	Raining
,, 28	30·204	S.W.	...	56	54	43	46	48	Overcast
,, 29	30·158	S.W.	...	58	55	47	52	54	Cloudy

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Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 21, Rue Bapts, Asnières, Paris.